AMERICAN ANNALS OF THE DEAF

Official Organ

Conference of Executives of American Schools for the Deaf
Convention of American Instructors of the Deaf

IRVING S. FUSFELD
Editor

POWRIE V. DOCTOR
Assistant Editor

Under the Direction of

IGNATIUS BJORLEE, of Maryland, 1942

PERCIVAL HALL, of the District of Columbia, *ex officio*

FRANK M. DRIGGS, of Utah, 1942

ELWOOD A. STEVENSON, of California, 1945

CLARENCE J. SETTLES, of Florida, 1945

MRS. H. T. POORE, of Tennessee, 1948

LEONARD M. ELSTAD, of Minnesota, 1948

Executive Committee of the Conference

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1940

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The Conference of Executives of American Schools for the Deaf, originally the Conference of Superintendents and Principals of American Schools for the Deaf, was founded in 1868 and subsequently incorporated under the laws of the State of Maryland in 1931. The Conference is an organization of the executive heads of schools for the deaf in the United States and Canada, and has for its object "to promote the management and operation of schools for the deaf along the broadest and most efficient lines and to further and promote the general welfare of the deaf."

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The Convention of American Instructors of the Deaf, founded in 1850 and incorporated by act of Congress in 1897, is an organization of educators of the deaf in the United States and Canada with the general object of "promotion of the education of the deaf on the broadest, most advanced, and practical lines," and for this purpose "to secure the harmonious union, in one organization, of all persons actually engaged in educating the deaf in America."

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AMERICAN ANNALS OF THE DEAF

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Next Meeting of the Convention

THE Thirty-Second Meeting of the Convention of American Instructors of the Deaf will be held at the Missouri School for the Deaf at Fulton, Missouri, during the week of June 23 to 27, 1941, Monday through Friday. As far as possible all arrangements are to be made to hold the sessions at the school. Accommodations and living quarters will be available at the school and at the local hotels. Those who prefer to room off the campus will be able to obtain accommodations at very moderate rates.

With Dr. Clarence J. Settles of Florida as vice president and program chairman, all are promised a most worth-while and constructive program. Tentative plans already indicate a very strong tendency toward helpful demonstrations and of timely and beneficial papers by leaders in the field as well as by speakers from outside the profession.

The host will be our genial and hospitable co-worker, Supt. Truman L. Ingle. Nothing will be overlooked in the way of comfort and most satisfactory arrangements by Mr. Ingle and his splendid staff. All can look forward to a glorious week. The group has already begun its work with the sole objective of making every teacher and visitor comfortable and happy during the busy week of the convention.

All are advised to begin thinking about and planning for the coming convention. All teachers in schools for the deaf should strive to attend and lend support. The convention and the general profession need them and they need the convention. Plans to be present should be made.

From time to time other announcements of importance will appear in following issues of the ANNALS.

ELWOOD A. STEVENSON, *President, Berkeley, Calif.*
BURTON W. DRIGGS, *Secretary, Gooding, Idaho*

The National Census and the Deaf

By RAYMOND NATHAN, B.A.
Public Relations Division, Bureau of the Census, Washington, D.C.

IN MAKING preparations for the 1940 Census, one of the most difficult problems before the Bureau of the Census was the decision as to just which subjects should be covered. For two years before the national inventory began, the Census Bureau was deluged with requests that it make inquiries of various kinds. The manufacturers of bird seed wanted the Bureau to ask 33 million American families, "Do you have a canary in your home?" The manufacturers of hair-dye wanted the census-takers to find out how many blondes, brunettes, and red-heads there were in the nation.

From the proponents' point of view, these questions were vitally important. Obviously, though, the factors of expense, time, and accuracy made it impossible for the Census Bureau to satisfy all demands. It had to keep to a minimum the number of inquiries on the schedule, and the only standard it could use in selecting the queries to be included was, "Which ones will provide the most useful information to the greatest number of people?"

With this criterion, it had to eliminate many useful questions in favor of others still more useful. Among the queries dropped were several which had been asked in previous censuses, including the one on deafness. The critical economic situation which had arisen since the 1930 Census forced the Bureau to turn its attention to new and pressing problems, such as housing, purchasing power, unemployment, and migration.

The decision to omit a special enumeration of the deaf in 1940 also was influenced by the unsatisfactory experience with past attempts. These difficulties were explained in a Census bureau pamphlet on "The Blind and Deaf-Mutes in the United States, 1930" which stated:

"No high degree of accuracy is to be expected in a census of the blind and of deaf-mutes carried out by the methods which it has been necessary to use thus far in the United

States. The reasons for this are that even with careful definitions of the groups to be included a large element of personal judgment enters into the decision of an enumerator as to whether a given individual should be reported as blind or as a deaf-mute; and inconsistencies follow from the varying degrees of intelligence and persistence of enumerators. Added to this, there is a tendency on the part of relatives to conceal the presence of blind persons or deaf-mutes in their families, especially in the case of children. Because of these conditions, and of changes made from time to time in definitions, as well as in the administrative methods used in taking the census, the enumeration of the blind and of deaf-mutes has doubtless always been more or less inaccurate and incomplete."

This statement was made after 100 years of experience with the problem of enumerating the deaf. The first enumeration of deaf-mutes was made in connection with the 1830 Census, when a line was provided on the population schedule for use of enumerators in noting the number of persons covered by the schedule who were deaf-mutes. In 1850 a column was substituted in which to report the existence of deafness in each case. This special column was included in the population schedule of each following census until that of 1900. In that year, it was omitted from the population schedule, and enumerators were provided with blank forms on which to report the name, age, and address of each blind or deaf person enumerated. In 1910 the column was restored, but in 1920 and 1930 the column was omitted, and a separate sheet again used.

Additional details about the deaf were obtained—in 1880 and 1890 by the enumerators through supplemental schedules, and 1900, 1910, and 1920 through correspondence of the Bureau with the deaf persons reported by enumerators or other agencies. This information covered causes of deafness, age at occurrence, degree of education, economic status, occupation, marital condition, and extent of state or county aid received.

Extract from the Life of Francis Green

[By his writings and other efforts, Francis Green, 1742-1809, may well be counted one of the pioneers in the movement to establish formal education for the deaf in this country, though the success of such an endeavor had to await, as Green himself put it, the development of a disposition on the part of the Public toward "an alleviation of human misery."

The account that follows is taken from "Genealogical and Biographical Anecdotes of the Green Family, deduced from the first American Generation by Francis Green for his Children's Information," 1806. A copy of this personal history, from which the portion here given is extracted, was made available for the ANNALS by the kindness of Mr. Edward F. Rowse, of Washington, D.C., a direct descendant of Francis Green.—*Editor,* ANNALS.]

HAVING repaired to England in 1765 and sold out of the Army in 1766, he returned and settled at Boston and married Susanna, daughter of Joseph Green, Esq. on the 18th October 1769, by whom he had Five Children, who died in infancy or childhood excepting Charles & Susanna, the latter (of a most amiable Character) was married to Stephen H. Binney, Esq. of Halifax 1794, and died in March 1802, leaving three Children. Charles, the former, an extraordinary Genius (peculiarly circumstanced) was discovered to be deaf when about 6 months old, & at 8 years of age was sent to Edinburgh to Messieurs Braidwood's Academy for Deaf and Dumb & rectifying impediments in speech, where he remained 6 years & acquired the faculty of speech and almost a perfect knowledge of Language, both oral and written, as well as Arithmetic, Geography &c, &c, & was preeminent in the art of painting at 16, but he was suddenly taken out of Life, being unhappily drowned when shooting at Cole Harbor near Halifax in 29th August 1787 *Etatis suae* 17.

Having experienced the almost incredible advantage gained by his son in his acquirements under the Braidwoods, he was induced (while residing in and near London) by the hopes of eventually benefiting that unfortunate class (in every generation) the Naturally Deaf and consequently Dumb, to publish a hasty pamphlet in London 1783, entitled "*Vox oculis subjecta* or a Dissertation on the curious and important art of imparting speech and the knowledge of

Language to the Deaf and Dumb, with a proposal for extending and perpetuating the benefits thereof" by "A Parent,"[1] honorable mention of which is made by the Reviewers in the *Gentleman's Magazine* September 1783, since which an Asylum for the maintenance and education of the poor in that predicament, has been instituted under the patronage of the Duke of Buckingham and others at Bemcondsey near London.

At the commencement of the American Revolt, which terminated in a successful Revolution, F.G. (altho' always a firm friend to and advocate for civil Liberty, & an avowed Enemy to the pretended unlimited power of parliamentary taxation) having adhered to the old Constitution in hopes of an honorable Compromise without recourse to Arms, & being with his Family in Boston when blockaded by the American troops, he experienced the great misfortune of losing his excellent wife, who died of a puerperile fever 10th November 1775. With his 3 young Children he left Boston on the Evacuation of it in March 1776, went to Halifax where he received (the sole instance) the compliment of a Commission as a Magistrate sent him by the Governor, the next year he went to New York & from thence, in October 1780, repaired to England where he continued until the spring of 1784. During his residence there Sir William Howe politely presented him with the flattering Certificate of which the following is a copy, viz:

To the Rt. Hon'ble the Lords Commissioners of his Majesty's Treasury, or whosoever else it may concern.

I do hereby certify that I was well acquainted with Francis Green, Esq. as an Officer in the 40th Regt. in which he served at the reduction of Louisbourg, Canada, Martineco & the Havanna with gallantry and great prosperity;—that I found him settled in Boston in 1775 where his Allegiance turned greatly to his disadvantage that he quitted that place in March 1776, leaving behind him as I understand, a considerable Property.

(*signed*) William Howe

[1] The authorship of this work, a book often referred to in the story of the early years of education for the deaf, has for a long while been clothed in doubt. At first appearing anonymously in London in 1783, the book was at one time attributed to Thomas Braidwood. Later letters indicated it as the work of Francis Green and according to the biographical narrative here given, authorship of the book may be credited to that gentleman.—*Editor,* ANNALS.

While in Europe F. Green made an Excursion from England to the Continent, visited Ostend, Bruges, Ghent, Brussells, Malines, & Antwerp, Amsterdam, &c in the Netherlands. He also travelled thro' half the Counties of England & of Scotland, including the Western Highlands. Manuscript Journals of each Tour are among his private Papers.

After the general Peace and the Acknowledgment of the independence of the American States he returned from Great Britain (in June 1784) to Halifax (Na. Scotia) and in the ensuing month of November was offered (without any solicitation on his part) the then vacant office of High Sheriff, which is there an annual Appointment. He accepted it at the instance of Chief Justice Finucane and it being there an annual Appointment he was 3 years successively returned at Michaelmas time & served therein accordingly for three years, during which the Chief Justice died (John Parr then Governor).

[Here appear, in the original version of Francis Green's own notes, certificates attesting to this service by him.—*Editor,* ANNALS.]

F. G. then retired to his farm at Cole Harbor and afterward to his other at Preston 4 miles from Halifax on the East side of the Harbor (where he built and improved). Soon after his Appointment to the Sheriffs Office (viz: on the 19th May 1785) he married Harriet Mathews, Daughter of the Hon'ble David Mathews, Esq., Mayor of New York previous to the Acknowledgment of Independence & since President of the Council & Commander in Chief of the Island of Cape Breton.

During F. G.'s residence at Preston the Office of Treasurer of the Province and Parliamentary Grants became vacant, by the decease of his brother Benjamin, viz: in Decem. 1793, at which time he was called upon and commissioned by Governor Wentworth (afterwards Sir John) as First Joint Treasurer,—pro tempore—with Geo. Thesiger, Esq. & continued in that Office until the arrival of Benning Wentworth, Esq. from England in Aug. 1792, who had succeeded to the Office of Treasurer. F. G. was also in Jan. 1794 (without solicitation) appointed the First Justice of

Three, then nominated to fill the vacant seats of the Court of Common Pleas.

In the year 1796 the Commissioners of the Maroons from Jamaica arrived at Halifax with 600 Blacks and Purchased his Lands (and Buildings) at Preston, Cole Harbor & Dartmouth to make a settlement for them. And now finding himself without any adequate employment (the Judges of the Common Pleas having no Salary & a precarious income by Fees only), and also having always had a Predilection for the Land of his Birth and Ancestors & his native Country, which at that period was respectably federal & appeared to open its eyes to discern the folly of an alliance with France, & soon after declared it null and void, F. Green removed with his Family and took up his residence at Medford near Boston in June 1797.

The following is a list of his Children by his well beloved consort Harriet:

1st, Harriet Mathews, born at Halifax 17th November 1786, died at Medford 28th Aug. 1803, Aet 17.

2d, Henry Francis, born at Halifax 13th May 1789.

3d, Anna Winslow, born at Preston (Na. Scotia) 26th July 1791.

4th, Eliza Atkinson, born at Preston (Na. Scotia) 3d Oct. 1794.

5th, Mary Hall, born at Medford, 12th Sept. 1799.

6th, Mathews Wylly, born at Medford, 5th Feb. 1803.

N.B.—All, with the exception of the first child (who was inoculated with small pox in Halifax) have been inoculated with Kine Pox by Dr. Waterhouse & Dr. Brooks at Medford.

In 1798 F. G. was presented with a Certificate of Admission as a Member of the Humane Society, Boston.

He has since filled up some of his vacant and leisure time at Medford with his humble Endeavors to disseminate (in this Country) the knowledge of the practicability of The Important Art of Imparting Instruction to the Deaf and Dumb, to enable them to speak and converse intelligibly—*viva voce*—as well as of educating them in the fullest man-

ner (by various publications of his, with extracts from the Abbé de l'Epée's letters, &c, in the Boston newspapers, the *Palladium* especially (in 1803-4-& 5) in hopes that this, his native Land, might eventually if not speedily experience an Alleviation of human misery in this instance, similar to other Nations (viz: in Europe) where peculiar Seminaries have with success of late years been effectually established—but the Success of his well meant Efforts must depend on the dispositions of the Public—It has been ascertained by Returns from the respective Ministers of the various townships that there are seventy in the State of Massachusetts, & many of them very fit subjects for instruction, & it is calculated that according to the proportions of population thro' out the different States there must be nearly five hundred now existing in the U. States of America. In addition to his other disinterested exertions in behalf of the Deaf and Dumb, he published in 1805 Proposals to edite an elegant prose translation of his own, after the manner of Fenelons Telemachus of Tasso's "Jerusalem delivered," the Profits (if any) to be for the benefit of those in that predicament.

F. G. also translated the whole of the Abbé de l'Epée's book on the manner of his instruction of the deaf and dumb, entitled "Institutions des Sourds et Muets."

But the Philanthropy and Charity of the present era seem to be elbowed off the Stage by the predominant Speculations of the Banking Mania & the universal Lust of Lucre, Neither Compassion, Humanity, nor Taste are likely to avail!—

Crescit amor Nummi, quant ipse Pecunia crescit
The Lust of Lucre keeps pace with the increase of Pelf.
O Tempora! O Mores!
Oh the Times! Oh, the Manners!

A Co-operative Job Training Center for the Deaf—If!

By HARVEY B. BARNES, M.A.
Supervising Principal of the Vocational Department, Illinois School, Jacksonville, Illinois

CO-OPERATIVE vocational education is a term used to describe a type of training originated by Dean Schneider of the University of Cincinnati. It is also called the Schneider Plan or the Cincinnati Plan, since it is used extensively in that city.

It is based on the theory that job training is most effective when shop experiences can be gained in the occupational environment under actual working conditions of the job for which the student is being trained, while other parts of the training program are best given in a school planned and equipped to correlate its subject matter with real experiences of the job.

The student's time is divided between school and shop, usually on a "fifty-fifty" basis. In order to offset production difficulties in shops which agree to employ students of the school, a device called the "double-headed learner" or "two-boy plan" is used. The pupils take week about, a week in the shop and a week in school.

Prosser and Allen in *Vocational Education in a Democracy*, say, "Theoretically there is no question that the co-operative school is most efficient. It puts the student into the real environment of the occupation, and trains him on real jobs under the working conditions which prevail in that occupation."

There are difficulties similar to those met by beginners under the old apprenticeship training. Sometimes, for production purposes or because it is easier, a foreman or employer will keep a student on one type of work, which has been learned well, for too long before sending him ahead to learn the next step. This is not likely to be so serious a drawback, however, for the student who is still connected with a school through the co-operative plan as it might be for an isolated apprentice learner.

Certainly, for most of our deaf pupils, the co-operative plan, or some variation of it would be most practical and ideal—"if, if and if."

It is in the hope of surmounting these ifs that this article has been written.

If there were employers available who would do their half of the co-operative training job, giving training and consideration to boys who the school knows could produce;

If we had time to go out and hunt up employers who would assume this half of the job while our school assumed the other half;

If we were really prepared and equipped to co-ordinate a large variety of job experiences with related subject matter;

If there were enough older pupils in each of our schools, or any one school, who were sufficiently advanced to qualify for co-operative learning situations which might be available to them so that our schools could afford to employ full-time contact or placement officers;

If the schedules of the advanced departments in our schools were not so inflexible that the practice of a week in school and a week on the job would not keep a great part of our schools in turmoil;

If most of the ten to fifteen thousand young deaf persons between the ages of eighteen and twenty-five from all our schools including ex-pupils could be brought together for about three years during this seven-year period, near a populous center where a variety of industries suitable to all of them could be found;

If we could build a large job-training center, or technical or vocational school for the deaf in that community and equip the school, not only to give related subject matter for students who could be immediately placed in co-operative training situations with various employers, but to maintain a variety of shops on a productive basis in the school for those whom industry does not immediately absorb;

If by making this school largely self sustaining through its farm and experiment station, greenhouses, cannery, clothing factory, building trades and mechanical departments so

that it would advertise the real abilities of the deaf to the extent that both local and national employers would be ready to co-operate and furnish jobs with experience requirements in sufficient variety to suit the abilities of most, if not all of our deaf students;

If the public, or even our own profession, could be made to realize that the opportunities which our nation affords to the average deaf child generally stop just short of the point which would usually make him a skilled workman, a self reliant and happy citizen; that the few additional training opportunities which exist are out of reach for any but the exceptional deaf person; that it is still true that most deaf persons are unable to understand much as it is presented in schools other than by trained teachers of the deaf; that educational opportunities in most state schools for the deaf extend little beyond the eighth grade; and that vocational opportunities usually stop at the same point;

If we would look beyond precedent in the education of the deaf and see that salvation lies as much in finding a public which understands the deaf and their ability when properly trained, to do almost anything well, as in training the deaf to understand a public which has no patience or time for them;

If the government honestly desires to bolster its skilled and productive man power, for defense in case of war, for better living in case of peace;

If, finally, just a few hundred readers, who believe that the logic of this article is essentially true, would get behind the writer's "Proposal to Establish an Opportunity School to Meet the Need for Better Technical, Agricultural and Vocational Training for the Deaf of the Nation"; if they would get their friends, the parents of deaf children, and their legislatures behind it, all the qualifying ifs would be erased.

Such an educational project would be the best of self-liquidating investments for our nation. The school would bring new meaning, joy of achievement to the lives of many deaf people who are now apparently doomed to a life of semi or complete dependence.

This something should be done now to increase the happi-

ness of many whose double-edged handicap in communication we educators of the deaf are best situated to understand.

We should sit down and write some letters to friends of the deaf, ask them to help us build a job-training center for the deaf, to help the young deaf people advance in the field where their handicaps in communication should least impede, to give them opportunities which they can grasp, to build a haven where they can understand and be understood.

It will be done if we who understand will all do our part.

Some Values of the Rhythm Orchestra in Schools for the Deaf

By RUTH C. GAY, B.A.
Instructor in the Louisiana School, Baton Rouge, La.

WHEN we observe the enthusiasm of the little deaf children as they rush into the practice room to get their drums, triangles, clogs, sticks, tambourines, cymbals, bells, whistles, and xylophones, their attitude of appreciation and interest reveals the pleasure which they receive from the Rhythm Orchestra.

Of course it is not necessary to mention that, due to the handicap of deafness in these children, the string and wind instruments are not generally used with them.

For a number of years rhythm orchestras have been popular in schools for children with normal hearing. They have many advantages in the teaching of music appreciation and, in some cases, have helped to lay the foundation for musical careers through the stimulations given in this early training.

In schools for the deaf the limitation of the instruments used does not lessen the values received from this kind of experience.

Among the primary values of the rhythm orchestra in schools for the deaf are to accentuate the vibrations, strengthen the stimulations the children receive, and have the children so filled with a sense of rhythm that their reactions will approximate as nearly as possible those of hearing children.

Let us consider the elements incident to rhythmic perception. Duration or timing of units is one factor. The amount of force applied—accent—is another element.

Motor rhythm is force manifested in muscular movement. Here the rhythm orchestra is of great value. It is hard for the highly nervous type of children to keep accurate time. They are generally slightly ahead or behind the beat. They have to be shown how not to let their instruments, such as bells, clogs, and others, sound when they are not in use.

Gradually when they gain relaxation and self confidence, they become unconscious of the fact that in marking time they are performing an exercise and after several months they generally succeed in keeping perfect 2/4, 3/4, and 4/4 time. This type of work should be carried on with special children for years beyond the usually accepted age limit for normal children.

The rhythm orchestra leader should make the work so attractive and interesting for the children that their intellectual curiosity will be aroused, to the end that in their efforts to perform acceptably they will manifest perfect concentration.

One suggestion to stimulate interest is to change instruments and allow the slow children to use the more difficult ones occasionally. This will not only encourage them but they will be benefited by the opportunity which it affords for mechanical rhythmic arm movements, and as a result they will be pleased with their achievement and will handle their instruments with acknowledged success.

Another value of the rhythm orchestra is that it may include the type of children who for various reasons are not suitable for programs or show work of any kind. Most children yearn to receive applause behind the footlights, but these children, who because of their handicap have always had to sit in the background and watch others perform, seem to have almost a passion for taking part in plays, games, and rhythm orchestras which bring them before the public.

In the Louisiana State School for the Deaf 25 children from the primary department are included in the rhythm orchestra. They are allowed to have this experience for two years. These children look forward eagerly to their practice periods twice each week. A great many of the other children, who for various reasons are not having this particular training, beg to join this group.

On the floor the children are seated according to size in semi-circular rows. At first they are taught to recognize and mark time. The brighter and more rhythmic ones soon catch on to the accent and in their enthusiasm help the others; this carries over even during their play periods.

Before the instruments are distributed among the children, the teacher holds each one in her hand and points to a symbol which represents it. For example: S represents sticks; C, clogs; Δ, triangles; B, bells; T, tambourines; o cymbals; D, drum; W, whistle; X, xylophone. After the children become familiar with the instruments they are given individual attention in holding and playing them.

The time of the piece is printed on large charts, the rests are indicated and the symbols are substituted for the real notes. The teacher calls attention to the name of the piece by pointing to it and saying the name. As soon as the children have acquired the speech they say the name. Near the end of the year they ask to play their favorite pieces.

Some of the nursery rhymes used are, "Little Boy Blue," "Little Bo Peep," "Little Miss Muffet," and "Dickory, Dickory, Dock." The last is their favorite one. "School Days" and "The Month of May" are other favorite numbers.

The children also have their favorite instruments. The drum leads in being the most popular, the xylophone and the bird whistle rank second and third respectively. It is important to select a child with a good sense of rhythm to play the drum because the drummer must keep perfect time.

Although the xylophone is the next instrument in popularity, the younger children usually realize their inability to handle it and are willing to have a second-year child play it regularly. However, they are fascinated with it and they crowd around the table where it stands, but after they have been allowed to play a few notes they seem satisfied and willing to go back to their original instruments. The bird whistle is managed better by a well-developed child.

Last year besides participating in various school affairs the rhythm orchestra played at several entertainments in town. The joy of these outings together with the thrill of wearing their green and white uniforms made the children exceedingly happy. It was an incentive to them to put forth their best effort during the practice periods as well as during the performance.

Since responsibility is developed by being responsible, it is a good idea to assign duties to different children. One

child may be responsible for giving out the instruments from the cabinet, one may help put them away orderly, one may be responsible for filling the bird whistle with water, and different children may be occasionally allowed to direct the orchestra. This amounts to more than a duty; it is an emphasis in acquiring character traits.

We feel that much has been accomplished when there is a noticeable improvement in the muscle development, coordination, timing, and accent of the children. The rhythm orchestra when properly handled will afford continued improvement and growth along these lines. And success after all is measured by growth.

An Experiment in Controlled Reading

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WORK with mechanical aids for the improvement of reading in schools for hearing children has attracted such favorable attention during the last few years that it was deemed advisable to set up an experiment recently in the Missouri School for the Deaf to determine whether or not these instruments might be used to good advantage with the deaf. The purpose of the investigation was to find out whether or not an instrumented program of reading would materially improve the reading habits of deaf children and to discover whether or not such improvement could be secured without undue eyestrain.

The pupils used for the trial included 29 boys and girls from the fifth, sixth, seventh and eighth grades of the school. Of these, fourteen constituted an experimental group while fifteen were control subjects. Each of the four classes was divided approximately in half so that each grade level was represented in both the experimental and control groups. As the classes belonged to a rotating department, they all came to the same teacher for their work in reading, thus reducing variability in teaching techniques to a minimum. In age, sex, reading ability, and general achievement the groups were roughly equated. Comparative data on age and scholastic achievement are found in Table I.

APPARATUS

The instruments used in the investigation were the Metronoscope and the Ophthalmograph. The former may be described briefly as a motor-driven device by which reading material on a wide paper roll can be presented word by word or phrase by phrase at a controlled rate of speed. Three shutters across the front of the instrument open and shut in order from left to right giving short exposures of the suc-

cessive words or phrases which appear on the roll behind the shutters. The effect of the machine is to give practice in rhythmic left-to-right eye movements such as are necessary for rapid and efficient reading. At the same time the apparatus works against undesirable regressive eye movement

TABLE I
SUMMARY OF AGE AND ACHIEVEMENT OF EXPERIMENTAL AND CONTROL GROUPS

	Median		*Average*	
	Experimental Group	*Control Group*	*Experimental Group*	*Control Group*
Age	20	20	18.8	18.6
	*Achievement Scores in Terms of Grade Level**			
Paragraph Meaning	5.3	5.8	5.9	6.1
Word Meaning	5.95	5.3	6.3	5.7
Average Reading	5.65	5.4	6.1	5.9
General Achievement .	7.3	7.0	7.3	7.2

* These data are based on results from the New Stanford Achievement Test which was administered just prior to the time of the experiment.

while stimulating quickness of perception and retention of what has been read.

The Ophthalmograph is a companion instrument which is used to record eye movements on motion picture camera film. By means of this device it is possible to check accurately not only reading speed but duration of fixation of the eyes on a particular word or portion of a word as well as lack of certain types of binocular co-ordination.

PROCEDURE

At the beginning of the experimental period, the eye movements of each subject were recorded with the Ophthalmograph. From the graphs so secured, a record was made of the rate of reading, comprehension score, number of fixations per hundred words, number of regressions, and average span

of recognition. Comprehension scores were secured by standard tests which are included as a part of the photographing technique. Other data mentioned were taken directly from the eye movement photographs.

Daily practice with the Metronoscope was begun in the classroom during the regular reading period. While the experimental half of the class worked at the instrument, the remaining half read independently on matter not included in the regular daily assignment. Thus both groups had the same regular work. The only difference in the two was that the experimental group had a few minutes' daily exercise on the Metronoscope while the control group practised free reading. This arrangement was repeated with each class, and while it did not represent an ideal plan for testing the results of the conventional and the experimental techniques, it seemed the only feasible method where comparable classes of the same grade level were not available.

Following the practice period at the beginning of each daily lesson, the two halves of the class were recombined and the major portion of the allotted time for reading was spent in the ordinary manner. The experiment continued over a period of twelve weeks, giving each child in the experimental group an aggregate of approximately seven hours' practice on the Metronoscope. This time was distributed over 60 lessons having an average duration of seven minutes. In the beginning the practice was never continued for more than five minutes at a time, but as the work progressed lessons were lengthened up to fifteen or twenty minutes.

In the early stages of the work, material on the primary level was used and was presented very slowly for brief periods of time in order to avoid the risk of eyestrain as possible habits of regression or long fixation were broken down. As the weeks passed, more difficult materials were introduced, the practice periods lengthened, and rate of reading increased. Frequent oral and written checks were given to make sure that the pupils were reading with satisfactory comprehension. No material above sixth-grade level was used, so that in most cases the language was well within the grasp of all the subjects. A disadvantage, of course, in

using easy materials with the more able pupils was that it did not extend them to their fullest capacity.

Both experimental and control groups were rechecked with the Ophthalmograph at the end of the twelve-week period, and the results were compared with the original graphs.

Results

During the course of the practice with the instrument, careful watch was kept for any evidence of eyestrain. None was observed save with two or three pupils whose eyesight was definitely below normal. These occasionally mentioned some feeling of strain and fatigue but no more frequently than in regular school work. In the main, the pupils reacted favorably to the machine and seemed to have little difficulty in adjusting themselves to it with regard to vision. The absence of overt complaints from the pupils and the lack of involuntary reactions such as excessive blinking or wandering attention were taken as sufficient proof that in ordinary cases, the instrument could be used without fear of overtaxing the children's eyes.

The results relating to the improvement of reading habits were more easily checked. The control group showed a median increase in rate of 28 words per minute, while the median gain for the experimental group was 44 words per minute. This represented an improvement of 11.9 per cent for the control group as against 21.5 per cent for the experimental group. The difference in these two is probably less than could have been expected under other conditions, for it is unquestionably true that the use of the instrument with the experimental group stimulated the control group to a much greater improvement in speed than might have been expected in a comparable time without the element of competition with the instrumented group.

When the factor of comprehension is taken into account, the difference between the improvement of the two groups is more apparent. Reading, of course, is more than merely seeing words, for to read, one must comprehend. In order to take this comprehension factor into account in comparing the reading ability of the experimental and control groups, a

"reading efficiency" score was derived for each child by taking the product of his rate in words per minute and his comprehension score on the Ophthalmograph test card. Thus, if a child read at the rate of 250 words per minute with a comprehension score of 60 per cent, his reading efficiency would be 60 per cent of 250, or 150 words per minute. The comparative gains as measured in these terms appear in Table II.

TABLE II

COMPARATIVE GAINS IN READING EFFICIENCY

	At Beginning of Experiment	*At End of Experiment*	*Gain*	*Per Cent of Gain*
	Words per Minute*			
Control Group (Average)	190.5	204.1	13.6	7.1
Experimental Group (Average)	169.9	207.3	37.4	22.0
Control Group (Mean)	186.5	189.0	2.5	1.34
Experimental Group (Mean)	175.7	207.2	31.5	17.9

* The product of actual rate in words per minute and the per cent scored on the comprehension check at the end of the Opthalmograph test.

The Ophthalmograph records did not reveal any unusual conditions with respect to reading eye movements of the deaf that might not have been expected with a hearing group of the same grade level. That is to say, the tests did not indicate that the eye movements of the deaf differ from those of hearing children to any marked degree. In the matter of regressions, duration of fixation, and eye span the deaf group held close to the established norms. Improvements gained by use of the Metronoscope seemed to depend upon a general change affecting all these components of the reading process.

CONCLUSIONS

1. The Metronoscope can be used with deaf children as a classroom teaching device without discernible eyestrain on the part of the subjects.

2. Systematic practice with the instrument will produce substantial gains in reading efficiency.

Experience gained during the experiment and in subsequent use of the machine as a teaching device indicates that under typical classroom conditions Metronoscope practice is of greatest benefit to the very slow reader and to the child who reads rapidly but with a low degree of comprehension. In the case of the former type, practice at an average rate of speed for the class tends to speed up the slow reader without loss in comprehension. In fact, pupils who make the greatest increase in speed also improve their comprehension scores. The rapid but careless reader, on the other hand, is forced to read more slowly with the instrument, but the loss in speed is commonly compensated for by a marked increase in comprehension. It is possible, too, that further practice in cases of this sort may eventually permit the pupil to regain his full speed while maintaining the degree of comprehension attained at the slower rate of reading. Our work has not continued long enough to offer definite basis for conclusions on this point.

Use of the Metronoscope in the classroom presents some difficulties which should be mentioned. The principal difficulty is that lack of homogeneous grouping even in a small class of eight or ten makes group practice on the instrument very difficult. As we have indicated, the principal gains accrue to the slow readers and the rapid careless readers. Practice at a rate which will benefit the former group, however, may be so slow as to be of little worth or to do actual damage to the child who reads with more than average speed and with a good understanding of what he reads. The solution of this problem consists in using the Metronoscope as a clinical instrument or in eliminating the above-average readers from the practice group until the general average of the class has been improved enough so that the entire class can work profitably together.

Another difficulty which must be taken into account is the nature of the material available. The problem is the same as that commonly met in the selection of textbooks; namely, that interest in material must often be sacrificed in favor of simplicity in vocabulary and language construction. That is, to avoid excessive vocabulary load, third-grade

materials, for example, must be presented in the fourth or fifth grade with the result that the content may be too juvenile to appeal to the age group with which it is used. Careful selection of stories and good teaching may help to allay this handicap to some extent.

A further difficulty in using the Metronoscope with the deaf is that the techniques as devised are intended for use with hearing classes and are not always applicable to the deaf class. A teacher using the instrument must not only learn the mechanics of its operation but must plan her own techniques as she goes along.

Despite these drawbacks, however, the instrument is one which will undoubtedly aid materially in the improvement of reading for the deaf child as well as for the hearing. It is not a cure-all or a panacea for the knotty problem of teaching the deaf child to read, but it does offer some help in the solution of the problem. For this reason it is sure to find a place in the reading program in an increasing number of schools.

The School Journey

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MODERN educators are stressing more and more the necessity of concrete experiences preceding abstract teaching. Educators are realizing that understanding, appreciation, and information cannot go beyond the individual's ability to apply what he has learned in the past to immediate experiences. As a group of visitors stood around a replica of the Parthenon thinking of all the events connected with this building and the effect upon history of those who had stood within its walls, a man pushed near and said "Ain't that a pretty little house?" He gave himself away in six little words. One sees in anything only that which one is prepared and trained to see.

In view of the fact that in the past visual aids have been misused to the extent that superintendents and principals have grown skeptical regarding their use, it seems necessary that teachers prepare themselves to use them in a scientific way. One must admit that visual aids have been over used, used without any definite plan, used when they did not have direct bearing on the subject at hand, used for pastime, and used because they were supposed to be used.

To properly estimate the value of the school journey it is necessary to know something of visual aids in general. Hoban, Hoban and Zisman in their book, *Visualizing the Curriculum* have defined and classified visual aids in the following way, " A visual aid is any picture, model, object, or device which provides concrete visual experience to the learner for the purpose of (1) introducing, building up, enriching, or clarifying abstract concepts, (2) developing desirable attitudes, and (3) stimulating further activity on the part of the learner. For convenience these various visual aids have been classified as (a) the school journey, (b) the museum, (c) motion pictures, (d) still pictures, (e) graphic materials."

These same authors define the school journey as "An edu-

cational procedure in which pupils are conducted for educational purposes, to places where the subject matter may be studied first hand in its functional situation."

The school journey was used to some extent by the Greeks. However its first systematic use as a school activity belongs to the present century. England first put the school journey into the curriculum in an organized way. In 1905 the school journey was officially sanctioned in England and the British School Journey Association was organized. This organization included all teachers who were interested in the journey as an aid in teaching.

Other countries have adopted the journey as an aid in instruction. The use is growing rapidly in America.

The school journey offers many advantages.

1. It is one means of blending school work with actual life.
2. It is the most concrete of all visual aids.
3. It is helpful in stimulating interest in nature, art, etc.
4. It is effective in correlating subjects of the school curriculum.
5. It offers opportunities for developing keenness of observation.
6. It may be used in testing what has been accomplished with the pupils in information, abilities, habits, skills, and attitudes.
7. It helps to eliminate individual differences in that each child has the same experiences.
8. It may be used to introduce a unit, for research, and for testing and summarizing.
9. It offers group activities which require co-operation by all in order to succeed.
10. It is less expensive than other visual aids.

After listing the advantages, it might be wise to give some ways that the journey as an aid in instruction might be misused or used in such a way that the best educational and social values would not be realized. The values come through a well thought out, well planned, and well supervised program. These mistakes are often made in using the journey:

1. To fail to correlate it with the curriculum.

2. To take a journey too long for the allotted time.
3. To crowd too much into one trip.
4. To fail to recognize it as being only one tool among many.
5. To allow some of the children to be passive listeners by failing to give definite assignments.
6. To make the journey too complicated for the children to get the most benefit from it.
7. To place more emphasis on the visual aid and less on the child.
8. To fail to consider problems of discipline.
9. To have a teacher-made program rather than one planned by the pupils and guided by the teacher.

Education comes largely through seeing and hearing. A child deprived of one of these faculties needs an extra amount of emphasis placed on the remaining one. The deaf child needs many concrete experiences before he is introduced to the abstract. It is more difficult to get interest and co-operation from a child who is handicapped than from a normal child. The journey can increase interest by offering a natural rather than an artificial environment in which to learn.

Some of the chief objectives in teaching the deaf which the journey might help to bring about are:

1. A desire to use speech at all times.
2. An interest in speech reading.
3. A larger vocabulary.
4. Ability to work independently.
5. Orderly and courteous behavior on all occasions.
6. Co-operation with the teacher and the class.
7. Pride in work well done.
8. Proper care of property.

All these point to the one big goal—a more normal child.

These are possible journeys that might be taken by a first grade in a residential school for the deaf, with a few points to be considered under each.

I. *To a Grocery Store*

(a) To see the fruit and vegetables. (These are taught in the first grade.)

(b) Ideas for a store in the classroom.

(c) Practice in speech and speech reading in buying articles.

(d) To appreciate care of a store.

II. *To the Greenhouse*

(a) To select plants for the schoolroom.

(b) To see how the soil is prepared and the seeds planted.

(c) To see how plants are cared for.

Why the glass?

Why heated?

(d) To get special information about the plants selected.

The subject of flowers will provide for oral and written English, for speech reading, for art, for literature, and for speech.

III. *To the Barn*

A large unit on the farm might be one of the big units for the year.

(a) To see how the barn is made.

(b) To see how the cows are cared for.

(c) To see the cows milked and the milk prepared for use.

(d) To compare with cows at home.

(The children should have read and probably memorized "The Friendly Cow" by Robert Louis Stevenson.)

IV. *To the Children's Department of the City Library*

This would help in arranging the library in the room.

(a) To see a large library for children.

(b) To see the arrangement.

(c) To read something about the Unit being studied or a story.

(d) To get material for written language.

(e) To check out books.

(f) To look through the stereoscopes at pictures relating to the work being presented, if possible.

V. *To the Pet Shop*

This might be a culmination of a study and discussion of cats, dogs, rabbits, monkeys, turtles, and fish.

The pupils always have fish and a small turtle in the room. They like to feed and care for them. They have seen and had dogs, cats and rabbits for pets. They would have read in Number Stories and perhaps other stories about monkeys. The points involved would be:

(a) To see how pets are cared for in large numbers.
(b) An appreciation of the work of keeping such a shop.
(c) To know something of the cost of animals.
(d) To use question forms in a meaningful way.

This trip might be used at any stage of the unit. However, it might serve best as a review of the study of pets.

VI. *To a Home*

Articles of furniture and rooms in a house are taught in the first grade.

VII. *Other Subjects*

There could be many short walks to gain concepts about certain words. After a group of related words are taught it is best to take the children to see the real objects.

In conclusion one might say that the journey, if properly carried out, is a valuable instructional aid to a teacher of normal children and even more valuable to a teacher of the deaf in providing an environment that is conducive to the acquiring of knowledge, right attitudes, and desirable social habits.

A Check List

These questions might be used in checking the plans for a journey. If after careful consideration each question can be answered in the affirmative, it should be a worth-while aid to use.

1. Is the journey in response to a class need?
2. Are the pupils prepared for the trip?
3. Does the material to be studied justify this particular journey?
4. Is the relation to the school curriculum taken into consideration? No journey should be taken in isolation. Don't go merely because the children would like to go. "The purpose of a trip is always to further some activity."

5. Has the teacher been over the ground beforehand?
6. Will it encourage the changes that are desired in the behavior of the child?
7. Have the disadvantages as well as the advantages been considered?
8. Will this journey stimulate thinking?
9. Has the plan followed one specific purpose? If it is for introducing a unit, the procedure would not be the same as that used for acquiring information.
10. Are opportunities provided for the objectives to be realized? If to work more independently is one of the objectives, has that been considered in the plan?
11. Is this journey suited to these pupils, considering their age and grade level? An excursion to a pet shop would be more valuable to a primary class than a visit to a bank or a modern textile factory.
12. Is it pupil-planned and teacher-guided?
13. Is the plan based on such sound educational principles that the teacher would not hesitate in presenting it to one in authority?
14. Is she prepared to answer questions that might arise?
15. Does she believe in the journey as an aid in instruction that she cannot afford to overlook if a well-rounded child is to be the result?

Suggested Plan for a Journey

General Subject.....Social Science
Specific Subject.....Speech Reading
Type Lesson.....Activity Journey
Place.....The Dog Show
Time.....Morning

In the following plan the teacher has tried to show that the pupils have the needed preparation and that there are definite social and educational advantages offered by this particular journey.

I. *Preparation of the Class*

This journey is planned as part of the culmination of a unit on dogs. The pupils have read stories about dogs, writ-

ten short dialogues and original stories, made scrap books, read and memorized some poems, drawn pictures and looked at pictures, and have seen one type of each dog studied with the exception of the St. Bernard, Newfoundland, and Dachshund. They have question forms at their command sufficient for them to gain additional information. They have read about the dog show.

II. *Objectives*

1. To find out about dogs in the show: How they are cared for, why they are cared for as they are, how they vary in appearance and disposition, and how they are judged.

2. To plan and conduct the journey in such a way that the pupils will gain in the ability to co-operate, select materials, follow directions, work independently, and to draw conclusions.

Through the above objectives the following should be realized:

(a) A more normal child
(b) An increased appreciation of dogs
(c) More information about the subject
(d) Keener power of observation
(e) An added appreciation of the value of speech reading

III. *Purposes and Advantages*

1. To verify information that they have learned about dogs in regard to size, color, disposition, food, and care so that they will have more confidence in materials.

2. A chance to use question forms in a meaningful way so they will see their value in gaining information.

3. To see dogs being judged so that they will realize that judging is more than looking at a dog.

4. To see trick dogs in the ring so they will have a more definite concept of the meaning of trick.

5. To see dogs that they have read about but have not had the opportunity of seeing so that they may have an added appreciation of the less common breeds of dogs.

(No child can appreciate the St. Bernard and the story of Barry to the fullest extent until he has seen one. What

child can visualize the funny little Dachshund from a picture?)

6. To see many dogs of one breed so comparisons may be made and conclusions drawn.

7. To get experience in planning and evaluating a journey so they will have a basic plan for future preparation.

IV. *Pupil Preparation*

The suggestion for one trip came from the pupils. They brought newspapers and pictures to the room and discussed the show. They thought that over 500 dogs of all breeds in one building would be worth seeing.

The pupils decided that it would be wise to carry paper, pencils, a scrap book, and some pictures of dogs. They have made a list of questions which will be typed and a copy given to each child. These questions are to be answered without any assistance.

1. How many chows did you see?
2. What color were they?
3. Were they friendly?
4. What was the St. Bernard's name?
   (The place for finding the name has been discussed before.)
5. Which was the largest dog?
6. Which was the smallest dog?
   What was its name?
7. What color were the spaniels?
8. How many black spaniels did you see?
9. Were the spaniels friendly?

(The children will get this information first. They may refer to the pictures or the scrap book. The only requirement is that they all go upstairs at the same time.)

The pupils thought that some rules of conduct might help. They should be encouraged and helped to make rules for their guidance when such rules are necessary for effective group activity.

1. Leave the building quietly.
2. Don't run and push.
3. Thank the people who help you.

4. Let the girls go first.
5. Do not tease the dogs.
6. Boys will stand if the bus is crowded.

V. *Teacher Preparation*

1. Permission from the principal. If possible have him come to the room to see the work done and to discuss the work with the children.
2. Trip to town to see the manager and to discuss the situation with him. Go over the entire building in order to know definitely what problems might arise that might be prevented by discussion with the children.

VI. *On the Way and the Lesson*

1. The teacher will continue to answer questions that are asked by the pupils.
2. The pupils will be free to go about the first assignment which is to answer the typed questions and to obey the instructions given.
3. The teacher and the pupils will get information about three or four breeds of dogs that they are especially interested in.
   (a) Discuss the color and size.
   (b) Find out about the food. Get information from the owners.
   (c) Discuss dispositions.
   (d) Find out which one they like best and why.
   (e) Sit near the ring and watch the judges.
   (f) Call attention to definite words—stalls, leash, ring, judges, ribbons.
4. The return trip will be spent in exchanging ideas and asking questions.

VII. *How Evaluated*

1. Discussion by pupils and teacher.
2. By careful observation on the part of the teacher. Do not forget to give praise where praise is due.
3. Encourage the pupils to see the weak points and the good points in their plan.

4. The pupils should be able to draw such conclusions as the following:

(a) All dogs are not friendly.
(b) Dogs of the same breed are not always the same color.
(c) Dogs have to be well cared for if they win prizes.
(d) Dogs can be taught many tricks.
(e) Is it expensive to keep a show dog?

5. Test

(a) A class letter to the principal.
(b) Identify ten breeds of dogs from pictures.
(c) Draw a picture of a dog.
(d) Write five things that dogs can do.
(e) Which dog did you like best? Why?
(f) A short story in speech reading based on their new language.

VIII. *Outcomes*

1. Knowledges and Skills

(a) Better speech reading in general and exact material.
(b) More facts about dogs.
(c) Increased ability to follow directions and to obey instructions.
(d) Ability to work more independently.
(e) Increased ability to choose and reject.
(f) More meaningful concepts regarding words pertaining to dogs and a dog show.

2. Attitudes

(a) Pride in a task well planned and executed.
(b) An appreciation of the effect that good conduct has in making a trip successful.
(c) An increased desire to take good care of all dogs.
(d) An appreciation of the ability of dogs to obey orders.
(e) An interest in all dogs.

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Report on Pupils' Background

A Survey Made at the Lexington School for the Deaf in May, 1939

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The age-old question of whether heredity or environment has the greater influence upon a human being is still being debated, but more and more have we become convinced of the tremendous effect that environment and nurture exercise upon the child from the moment it enters this world. Many qualities and peculiarities, formerly ascribed to hereditary forces, are now being recognized as imitative behavior of those the child comes in close contact with during his formative period.

This knowledge has put a greater responsibility upon parents as well as upon schools. Constantly increasing numbers of parent-teacher associations, child study groups, psychiatrists and psychologists, and child-guidance clinics prove how great the desire is on both sides to understand "the whole child" in order to guide it properly.

In a residential school, such as the Lexington School for the Deaf, where children are accepted from many parts of the state, it is not possible for all parents to keep in personal touch with the teachers. And even where that is the case, there still remains the question: What is the general background of the pupils? What picture does the cross-out of the group reveal? Is it promising or does it tend to counteract the efforts of the school? In order to afford a glimpse into this situation, a study of the family background of the 303 pupils in attendance was made by the social worker and presented at a teachers' meeting in May of last year. It was a picture revealing a great diversity and also, unfortunately, many problems and many ills.

Of the 303 pupils, 253 were living at the school at that time and 50 were day pupils. The latter consisted mainly of nursery school children, too young to remain at the school over night, or of vocational pupils who were past eighteen

years and who had entered the school for industrial training on graduating from the academic department of some other school. Only 16 of the resident pupils were boys, the school having been reorganized in 1935 into a girls' school.

As to the cause and onset of deafness, the grouping listed below includes in the congenitally deaf group all children who were born deaf or who became deaf before language patterns were established, since any child who becomes deaf before language has been established is, educationally speaking, in the same group as one who was born deaf. The distribution is as follows:

I. Age of Onset of Deafness:

Group A—Congenital deafness (those born deaf or who became deaf before speech or language was established)	254	83.8%
Group B—Adventitious or acquired deafness (those who lost their hearing after speech and language had been established)	49	16.2%
Total	303	

II. Cause of Deafness (As reported by parents, supported in recently admitted cases by doctors' reports.)

Group A—(Congenital cases):

		Having deaf relatives
Deaf since birth	180	95
Injury at birth	4	
Accident	8	
Illnesses:		
Meningitis	31	4
Whooping cough	7	1
Ear abscesses	5	1
Pneumonia	5	
Infantile paralysis	4	1
Intestinal grippe	3	
Measles	3	
Mastoiditis	2	
Convulsions	1	
Sleeping sickness	1	
	254	102

Group B—(Adventitious cases):

Meningitis	23	
Ear abscesses	10	1
Mastoiditis	3	
Whooping cough	3	
Congenital lues	2	
Sleeping sickness	2	
Otosclerosis	1	1
Scarlet fever	1	
Measles	1	

Pneumonia	1		
Accident	1		
Suddent onset (cause unknown)	1	49	
		303	104 have deaf relatives (34.3%)

Only in fourteen instances were both parents deaf.

The religious distribution was:

	Number	*Per Cent*
Catholic	133	43.9
Jewish	104	34.3
Protestant	66	21.8

As to nationality, it was found that, while almost all of the children were born in the United States, their parents came from 31 different countries. In 96 cases, both parents were born in the United States; besides that, 21 American fathers and 29 American mothers married persons of other nationality. As far as it was possible to ascertain, English as chief language was spoken in 147 homes, or 48.5% of the total number.

Some of the other countries of parents' origin were:

	Both parents	*Father*	*Mother*
Russia	31	15	11
Italy	30	8	5
Poland	17	5	4
Puerto Rico	11		
Austria	7	6	3
Ireland	6		5
West Indies	4		

Only one or two parents came from each of the other 24 countries. Seventeen of the pupils were Negroes and fourteen were Puerto Ricans.

The geographical distribution of the group was as follows:

103 families, or 34.0%, lived in Manhattan
69 families, or 22.8%, lived in Brooklyn
41 families, or 13.5%, lived in the Bronx
40 families, or 13.2%, lived in Queens
6 families, or 2.0%, lived in Staten Island
44 families, or 14.5%, lived out of town, in various counties of New York State

As was to be expected, a wide range of occupations was noted among the parents, and it was also discovered that 68 mothers, 22.4%, were gainfully employed. Seventy-seven

different types of work, as reported at the time of application or as was known at the time of the survey, was done by the fathers. However, frequent unemployment and change in jobs do not permit an absolutely reliable report in this respect. Some of the numerically more represented occupations of the fathers were:

Laborers	31	Peddlers	6
Factory workers	12	Porters	6
Storekeepers	10	Restaurant workers	6
Painters	9	House superintendents	5
Tailors	9	Waiters	5
Electricians	7	Engravers	4
Printers	7	Watchmen	4
Salesmen	7	Bakers	3
Truck drivers	7	Carpenters	3
Chauffeurs	6	Farmers	3
Clothing operators	6	Mechanics	3
Cutters	6	Milkmen	3
Office workers	6	Street cleaners	3

Among occupations having only one or two representatives were: Accountants, barbers, blacksmiths, bookbinders, cigar makers, contractors, cooks, designers, letter carriers, life savers, longshoremen, pharmacists, physicians, plumbers, pressers, policemen, teachers, etc., etc.

The mothers' occupations were as follows:

Factory workers	18	Office cleaners	2
House workers	11	Beautician	1
Assisting husband in business	10	Cook	1
Janitresses	7	Laundress	1
Office workers	4	Music teacher	1
Milliners	3	WPA library assistant	1
Saleswomen	3	WPA teacher	1
Seamstresses	3	Waitress	1

The question presents itself as to who takes care of the home and the other children living at home while the mother is at work. It was found that most families of working mothers either shared a home with relatives or friends, or the young children were looked after by older sisters until the mother returned. Day nurseries and settlement houses were also utilized by some. In a few instances, however, the children were permitted to shift for themselves which, inevitably, brought complications. In such cases the social worker got in touch with a family welfare agency in order to remedy the situation. Some mothers had no other children besides the deaf child residing at the school which left them

free to go to work. Most of these also lived with relatives, a few in furnished rooms.

This report now comes to the part of the statistics which reflect our present social conditions and their frequently adverse effect on the lives of the children involved.

Of the 303 families, 121 (or 40%) had been receiving assistance from relief agencies at one time or another. Children of such parents, if resident pupils, and also others near the subsistence line, were receiving their clothing from the school from funds provided by the Department of Welfare or the respective counties of origin.

Four families were known to the S.P.C.C. and nineteen (or 6%) had had contact with either the Family Court or the Magistrate's Court.

It was also found that seventeen mothers were widows and nine fathers widowers. In addition, ten mothers and six fathers had married again.

Twenty-six parents (8.6%) were separated or divorced. It was in this group with its highly charged emotional tension that some of the children were found to suffer most keenly. Having affection for both parents and being often the center of dispute, the deaf child is bewildered, confused and greatly upset by the accusations one or the other parent may express freely in its presence. Much of our efforts has been directed to bringing about a better realization of the child's needs in such cases on the part of the parents.

Three fathers and one mother were found to be chronic patients in state hospitals.

Four children had been deserted by parents and one was an orphan.

It will be readily seen that the school must give the children in this latter group far more than an academic or vocational education. They, even more than the others, need affection and friendship, people interested in their daily affairs, in their joys and sorrows. They need a place which they can call home. Nothing hurts the institution child more than to see other pupils go home for week-ends or holidays, while he or she is left behind. Much individual effort is spent on this problem in order to make each child feel that he has "a

home" or at least a place where he is welcome, outside of the school building. Occasional week-end and holiday visits to approved homes of classmates or those provided through other sources are arranged frequently. Quite often such children develop real affection for the substitute parent and write letters to "mother" or other "relatives." During holidays, as Thanksgiving week-end, Christmas and Easter, all children having no home of their own are placed in such homes and most often paid for out of private school funds.

During the summer vacation all New York City children whose parents so desire are sent to camps for two weeks or longer; parents pay whatever they can, the rest is covered by the school. Here again, children having no homes remain at camp or in a carefully selected home during July and August. In this way, their emotional life is not starved and their relationships with others help to build up within them normal outlets.

In general, the school aims to have education and character development go hand in hand, to treat each child as an individual and to offset an adverse background by every means known to progressive views on child development. The parents' excellent co-operation is helping a great deal in this respect. Individual conferences between parents and the social worker, either in the various homes or at the school, frequent classroom observations and conferences with teachers, regularly held parent-teacher meetings and child-study meetings bring about teamwork and a better understanding on the part of the parents as well as of the school.

Although unable to take care personally of the many problems arising in the various families, the social worker is always ready to direct those seeking advice and assistance in the proper channels and to keep in touch with the respective agencies in order to see the cases through. Many families have been given information on the opportunities in the new housing developments, and several are already enjoying the benefits of beautiful homes at a rental they are able to afford. There is no doubt but that such improved housing conditions will have a far-reaching effect upon every member of a family, including the deaf child.

To Make Classroom Periods Really Helpful

By W. T. GRIFFING, B.A.
Instructor in the Oklahoma School, Sulphur, Oklahoma

Teaching is like an arrow—therefore you must know
What mark to aim at, how to use the bow—
Then draw it to the head, and let it go!

VAN DYKE did not write it as it is here given. He had *Life* where we have taken the liberty of substituting *Teaching*. If the reader feels the force of it, he will agree that they are beautiful words and that they carry an added significance to those of us who daily meet in the classroom with children who cannot hear. It is taken for granted that the readers of this article are either teachers or those who aspire to become such; if it is not so, then it is those interested in teachers and what they do to be called such.

A teacher, then, is very much like the person who pulls the strings of a bow, and his arrows are the lessons, academic and moral, that he would have his pupils learn. But before he can put his program across, there are certain things he must do. Colegrove tells us that all instruction involves both learning and teaching, and that these three elements always enter into these processes: 1. the subject-matter to be taught; 2. the consciousness and self-activity of the pupil; and 3. the preparation and personality of the teacher. It is to be inferred that a teacher must know his subject, his pupils, and that he must be fully aware of what he proposes to accomplish, and he must be convinced that he has the solution reduced to simplest terms.

It takes skill and a great deal of patience to shoot an arrow with any degree of accuracy. Contrary to the quaint belief that teachers are born, not made, it is a generally accepted conclusion this day and age that no teacher acquires professional skill by accident and that no teachers are born through some process of pedagogical predestination. It is desirable and possible for us to become good teachers and always better teachers, but only experience and observation

under competent and sympathetic supervision mixed with a lot of work will make us so.

A daily recitation can be compared to an arrow which is sent whizzing at a certain mark. Even as the arrow has to be weighed, examined, then carefully aimed, so, too, must the lesson preparation for the day's work. There must be no shot at random because no lesson can go home to the pupil which has not first gripped the teacher, and no one can teach with power who has not first studied his subject matter with such diligence that the recitation fairly carries the pupils along. These periods must be rehearsed; it is a thoughtless teacher, indeed, who waits till the class is assembled before he maps his plan of campaign, trusting to his fund of information and ideas, and to the spur of the moment to put him across.

Each teacher should know his lesson adequately and correctly. He must study, even as his pupils. He practically ruins the day's work if he asks what pages were assigned for study, or if an open book is on his desk during recitation of the lesson. There is the story of little Billy who complained to his father that his teacher was not fair because he made him close his book while he, the teacher, kept his open, and besides, he was older! If the teacher's knowledge of the lesson is hazy, if his interest is half-hearted and perfunctory, what wonder that the pupils' attention wanders and that it is necessary to pause now and then to rap for attention? As a general rule, pupils are not dull, lifeless listeners; they are keenly alive when they are listening to what is worth their while. The teacher who complains of inattention and lack of interest on the part of his charges is advertising his own inefficiency.

It should be kept in mind by the teacher that it is not his province so much to explain as it is to lead the pupils to see. This is important. Possibly he need be on guard lest he talk too much and his pupils not enough. A one-man class is a complete failure because it must be called a passive one. An active class is the dream of each teacher. In order to deepen an impression, it is necessary to secure expressions, therefore the teacher should encourage the pupils to come

forward in what might be called an open forum session. And because most persons must be urged to think, the process being sometimes painful and difficult, the teacher should give the pupils questions to think about and to call for their thoughts when recitations slacken a bit.

No real teacher will ever be guilty of drifting through a lesson session when he should be steering, because the pupils know which is which and they adopt corresponding moods. He will never be out on the ocean just sailing, waiting for the winds and tide to carry him where they will; he will shape his course skillfully across the uncertain seas, whether with the wind or against it. Of course, to do this he must pay a price—he must be willing to work hard, to prepare himself thoroughly for each class period, and to put himself heartily into his teaching. This is where good teachers are really made.

In conclusion, we are not so certain that we have expounded anything helpful to the one who may read this, nor do we believe we have given expression to anything new. But if one will read Van Dyke's words over again, it may be seen that what we have been trying to say here is a vital point.

Agreed, now, that good teachers are not born. They are good because they have learned the secret of getting the most out of the pupils, of making each recitation so interesting and such fun that the room overflows with life and power. All this does not just happen. Each session is carefully planned so that it will run off smoothly and efficiently. Certainly, a lot of work goes into the preparation of each classroom period. Isn't that part of our job? It is.

Vocational Guidance in Schools for the Deaf—II[1]

By ALAN B. CRAMMATTE, M.A.
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IN THE introduction to this paper it was stated that the thesis would be an attempt to assay the fitness of the guidance practices of the public schools for solving the problems peculiar to the education of the deaf and to suggest means by which the vocational guidance programs in schools for the deaf might be extended.

Probably the first means by which vocational guidance in schools for the deaf could be improved would be the organization of the work to co-ordinate it with other activities of the school and to make it a regular part of school practice. Few schools attempt guidance as guidance; most of them employ some of the means of guidance but not as recognized guidance procedure. Guidance in schools for the deaf is an unrecognized and wholly incidental procedure as a rule. With heavy expenses and a limited budget, many schools would find it impossible to employ a full-time guidance officer but the small number of cases for guidance would seem to indicate a part-time worker could cover the ground.

PREVOCATIONAL COURSES

In weighing the efficacy of prevocational courses offered in schools for the deaf, it is necessary to state that manual training and other subjects are offered the younger children more as a vocational than as prevocational work. This distinction is of considerable importance. To gain the greatest educational value from sloyd, manual training and handicrafts, the classes should be open to the pupils as soon as they can handle elementary tools without danger to themselves—the danger to the tools may be disregarded, for the cost of a small hammer or saw is much less than the gain in knowledge for the pupil who breaks it. Also, prevocational

[1] Continued from the ANNALS for November 1939 (vol. 84, no. 5), pp. 392-404.

instruction should lay stress on neatness and thoroughness—the sloyd schools in Sweden demand exactness down to a millimeter—and pride in doing a job properly.

On the whole, however, schools for the deaf are doing a more extensive type of prevocational training than the public schools where this type of course is more or less limited to retarded pupils.

Exploratory Courses

It is unfortunate that more schools for the deaf do not take advantage of their auspicious situations in regard to the establishment of exploratory courses. With several vocational classes in each residential school the equipment is already provided and very little extra cost would result from the planning of a schedule of exploratory courses. In suggesting action on this matter the following outline by Mr. Arthur G. Norris, supervising teacher of the Vocational Department of the Missouri School for the Deaf, is offered as a sample of what can be done:[2]

Objectives

1. To give a broad basic foundation in Industrial Arts
2. To give instruction in the language and mathematics of vocational pursuits
3. To give intensive training in a selected vocation

I. Prevocational training (three years)

A. First year (Age 12)—Primary Work
   1. Clothing care and repair (1 hour per week)
   2. Sloyd and toy making (1 hour per week)
   3. Wood-tool instruction (1 hour per week)

B. Second year (Age 13)—Rotating Classes
   1. Baking—4 weeks
   2. Barbering—3 weeks
   3. Gardening—4 weeks (spring and fall only)
   4. Leather working—4 weeks
   5. Painting—3 weeks
   6. Poultry-raising—4 weeks
   7. Printing—4 weeks
   8. Tailoring—4 weeks
   9. Woodworking—6 weeks

C. Third year (Age 14)—Semi-permanent Assignment
   Twelve weeks in each of three vocations to be selected by
   a. The pupil
   b. His parents
   c. His vocational teacher

[2] Norris, Arthur G., "How Practical is Our Vocational Program?" quoted in the *Western Pennsylvanian*, February 8, 1934, vol. xlii, pp. 77-79.

d. The vocational training committee
Mechanical drawing—Introductory Course—(2 hours per week)

II. Fourth year and after (Age 15)—Permanent Assignment. Full-time trade to be selected as in third year. Mechanical Drawing (2 hours per week for 2-3 years)

This course of study indicates what is being attempted in some of our larger schools. Smaller schools cannot offer so great a variety of subjects but they can provide for exploratory courses in the vocational subjects available, even if there be only two. In planning such a course it might seem better to extend the period of time allowed for each trial to give the pupil ample time to orient himself to the shop and to develop his interest. In a large school where a number of trial courses are available, the problem of time for an extended term could be solved by starting prevocational work at an earlier age, as is done at the Minnesota School where sloyd is begun in grade two or by putting specialized training on a scientific and intensive basis as is advocated in the Colorado Plan.[3]

Besides the objective of vocational selection, an exploratory course has a distinct cultural value in the insight into industrial conditions afforded, a value particularly worthy for the deaf child, whose social environment is often bounded by the confines of his school activities.

Of course, exploratory courses with their short tenures are a great nuisance to the vocational teachers, but a conviction that such a course will be an aid to himself and other vocational teachers in classifying pupils and eliminating misfits would compensate the vocational teacher for much of his trouble.

Occupational Information

When we consider that even the hearing child, who is more free to acquire social knowledge by his own efforts, is frequently quite ignorant of the practices and ethics of industries, the need for occupational information for the deaf child, confined to a great extent to the bounds of the school campus, must be evident. And in this field the school for the deaf has a great opportunity for improvement. The teaching

[3] See Annals, September, 1927 (vol. 72, no. 4), pp. 326-8.

of shop language is made a part of the academic curriculum in some schools, but very little instruction is given in general trade and social conditions. The primary and intermediate departments of many schools provide social information through reading but this type of instruction is not carried over extensively to the higher grades where the pupils are just beginning really to interest themselves in working conditions of the world. It must be recognized that the school for the deaf has a more difficult problem in educating the deaf child than has the public school, but an adaptation of the Grand Rapids plan[4] whereby the subject matter in the "tool" subjects—English, mathematics and the like—would make possible the co-ordination of occupational information with the formal curricula with little loss of time or instructional value. What is more, an injection of subject matter concerned with working conditions and present-day life would not only broaden the pupil's outlook but also enliven the "dry" cultural lessons. This would appeal to the practical bent evident in many deaf children.

Occupational information might be disseminated through the school library, taking advantage of the deaf child's leaning toward concrete and practical reading. A vocational bookshelf or a library in the vocational building would appeal to the pupils' interest in their prospective vocations. Occupational information might also be imparted through visual fields—moving pictures, slides, posters, field trips. This phase of the work has been fairly well covered by the more advanced schools. The methods are obvious.

Occupational studies for the use of teachers and counselors may be secured through the National Occupations Conference, 522 Fifth Avenue, New York City. A library of occupational information covering the vocations listed in the revised tabular statement of vocations taught in American schools for the deaf[5] would require approximately 75 pamphlets. The Vocational Guidance Subcommittee of the White

[4] For a description of the Grand Rapids Plan, see: "Outline of Work in Vocational Guidance in the Public Schools of Grand Rapids, Michigan," *Grand Rapids Public Library Bulletin,* ix October, 1913, pp. 133-40.

[5] ANNALS, January 1940, pp. 34-35.

House Conference has prepared an extensive bibliography of occupational information publications.[6]

Psychological Testing

It is possible that schools for the deaf are correct in rejecting psychological tests in vocational guidance, since many public schools do the same and it is difficult to test a deaf child fairly by measures devised for the hearing. However, it must be recognized that the attitude of the public schools is not necessarily a criterion. The intelligence levels determined by Yoakum and Yerkes[7] and Fryer[8] might yield beneficial guidance to the counselor, if only in a negative manner; comparison of intelligence and achievement might reveal an indifference to academic subjects justifying an increase in vocational instruction for certain pupils; aptitude and mechanical ability tests have some prognostic value, although possibly not in proportion to cost at this stage of their development.

One manner in which schools for the deaf might reap much future benefit is by co-operation with colleges and research bureaus wishing to undertake psychological studies with deaf children as subjects. The practical school teacher may regard these studies as too theoretical to be of value and as a nuisance, but lasting improvements come through scientific study, witness the impetus given to vocational education by the words of Professor Paterson at the Faribault meeting of the Convention of American Instructors of the Deaf in 1929. Co-operation in making pupils available and careful study of these monographs should yield rich benefits in future years.

Counseling

Deaf children, being limited in their social contacts and avenues of assimilation, are even more in need of counseling than are hearing children. Those desiring to establish a coun-

[6] White House Conference on Child Health and Protection. *Report of the Subcommittee on Vocational Guidance.* Century, New York, 1932, pp. 107-136.

[7] Yoakum, C. S., and Yerkes, R. M., *Army Mental Tests.* Holt, New York, 1920. pp. 132-33, 198.

[8] Fryer, Douglass. "Occupational Intelligence Standards," *School and Society,* xvi, 1922, p. 276.

seling arrangement in a school for the deaf would do well to consult Mr. Charles E. MacDonald's article in the ANNALS March, 1935, entitled "Counseling for the Deaf." Mr. MacDonald recommended counseling as necessary not so much in making educational adjustments since, with small classes, this is within the province of the teacher and principal but in preparing the deaf child for the larger and more difficult adjustment necessary to bridge the gulf between a deaf society as created by a school for the deaf and the world of the hearing. In suggesting a set-up for a counseling program he recommends: That the counseling be done by the school's field worker since contacts with the home and with the child are necessary adjuncts to proper counseling and the field worker is familiar with all sections of the state; that a cumulative record card be maintained to provide a complete individual history of each pupil—a suggested form is printed with Mr. MacDonald's article; that intelligence, prognostic and achievement tests not be employed as the language difficulties of deaf children tend to distort results; that counseling be limited to pupils in the advanced department, thus making a part-time counselor feasible; that all possible techniques, not just cut-and-dried procedure, be used for interviewing, and that follow-up work be done.

Counseling should be easier for schools for the deaf because of their smallness, the intimate, informal atmosphere and the fact that the school is home to the deaf child for a greater portion of the year.

Useful in counseling are the studies of the industrial status of graduates made by some schools, employment agencies and the U. S. Office of Education. These surveys are concerned with trades acquired at school, present trades followed, wage levels, reasons for changing trades and similar social and industrial phenomena. The Pennsylvania School for the Deaf has made two pertinent studies of this sort at intervals of twelve years, and a comparison of data concerning trades followed after leaving school and per cent employed reveals that adjustments in the vocational curriculum made after study of the first survey resulted in substantial increases in percentages of those following the

trades learned at school.[9] The value of such surveys, in adjusting curricula as well as in vocational guidance proper, cannot be minimized. Co-operation from alumni associations and other organizations of the deaf in administering such a survey should not be difficult to obtain.

Specialized Courses

In the matter of vocational education the schools for the deaf are pioneers and it would smack of impertinence to suggest further improvements in this branch. Vocational education leaders are fully aware of the deficiencies in the present situation and are constantly struggling for more equipment, new vocational courses, systematic courses of study, higher teacher standards, a closer tie-up with the academic department and other problems of this field.

In connection with guidance a further stress upon co-operative placement and use of the services of the state rehabilitation bureaus might result in an extension of vocational study opportunities for deaf students. This is done in several schools but the practice is not so extensive as it might be.

Placement and Follow-up

Placement work is of particular importance in vocational guidance of the deaf. In fact, it is a prime necessity, a much greater necessity for the deaf than for the hearing child. In the case of the deaf child it is necessary not only to place the graduate but also to overcome the natural prejudice of some employers toward the employment of handicapped workers and to aid both the deaf worker and his employer in making the adaptation necessary. Some teachers of the deaf contend that placement is the duty of parents and that the schools are sufficiently hard put to educate the child. That may be true of the parents of a hearing child, although the extensive placement work done by the public schools would seem to deny it, but the parents of the deaf child are confronted not only by the lack of complete

[9] Brown, Harry B., "Report No. 2 Regarding the Vocational Activities of Pupils During the Past Twelve Years," Pennsylvania School for the Deaf, Philadelphia, 1932.

knowledge of industrial conditions and demands made upon the deaf but also by unfamiliarity with the psychological and educational problems coincident to deafness. The ideal placement situation may be exemplified by that in force in the New York City schools for the deaf where a full-time placement officer is employed jointly by the schools to place graduates and to assist deaf persons in securing employment. Several states now have state labor bureaus, often headed by deaf men, which do a similar work. Those schools not fortunate enough to have regular placement officers might turn this work over to their field workers; the tie-up among placement, counseling and field work seems particularly convenient. Where no placement officer or field worker is available, the co-operation of the state employment office or state rehabilitation bureau might yield results.

Continuation Schools

Continuation schools as administered in the public school systems have little contribution to make to the guidance of the deaf. Since the school generally serves a whole state the pupils and graduates are scattered over such a large area that it would be impossible to hold night classes in the school and few educators outside of the profession are sufficiently capable to hold such a class with the deaf. The only feasible means of conducting a continuation school for the deaf is to have a summer session and the cost would far exceed the benefit to the small group that could convene for such a school. One school for the deaf has offered correspondence courses in English and mathematics for its graduates; but on the whole, continuation schools do not seem to be practical in the educative scheme for the deaf.

The Colorado Plan

The Colorado Plan outlined earlier in this paper seems to be strictly an intra-school plan since it does not include occupational information, placement, co-operative students, or counseling of students soon to be graduated. Nor does this plan provide for psychological testing or an exploratory course. Nevertheless, the Colorado Plan seems to be the

earliest organized guidance work mentioned in our professional literature and a good model for an intra-school guidance program.

Conclusion

While schools for the deaf seem to be doing work as satisfactorily as conditions will allow in specialized instruction and prevocational courses, there are certain deficiencies in vocational guidance in these schools that can be remedied without too great expense or difficulty. Vocational guidance is not organized in many schools. Exploratory courses, occupational information, counseling and placement and follow-up have in many cases been neglected and in others have not been developed to their full capacity for profitable achievement. Psychological testing does not enjoy good favor, although it is the belief of the writer that much good may come from this phase of vocational guidance in years to come and familiarity with the procedure might yield results not anticipated. Continuation schools do not seem to offer values in proportion to their cost, although the adult deaf do need and in many cases would welcome the opportunity to improve their education after leaving school.

The writer believes that there is probably no other extra-curricular problem of quite such importance to the social welfare of the deaf pupil as vocational guidance. And it is his hope that the present renaissance of vocational education will see a greater emphasis on vocational guidance and that educators will see the wisdom of Professor Paterson's words: " . . . industrial training" (and its corollary vocational guidance) "should become the most important and outstanding feature of education of the deaf,"[10] and will apply the following suggestions made by Dr. Rudolf Pintner:[11]

> Given this type of raw material, what can be made of it? My answer would be that we should emphasize the assets of the deaf rather than their liabilities. These assets seem to be mechanical and motor abilities of the deaf. Would it not then be wise to experiment with a curriculum which makes these abilities the central point around which all the rest would revolve? The core of the curriculum would be mechanical and motor; linguistic studies would be sup-

[10] Annals, September 1929 (vol. 74, no. 4), pp. 377-378.
[11] Annals, September 1933 (vol. 78, no. 4), pp. 296-297.

plementary. They would be used as auxiliary to the main purpose of education. And if so used, they might have more meaning for the deaf child. He would be better motivated than he is at present.

. . . our teaching lacks adequate motivation. The suggestion which I now offer to educators of the deaf is to try the other way around. Teach the deaf the things for which they have the greatest capacity; those things they can do best and in which they have, therefore, most interest. To make progress in such things they will find language helpful and thus our language work will be much better motivated. Preserve and develop the specific talents of the deaf, and in so doing we will help to remove their handicaps.

Conference on Problems of Deafness

National Research Council, Washington, D.C.
May 17-18, 1940

I. S. F.

Introduction

The National Research Council, under whose auspices in the past so much fruitful study has already been carried out in the field of auditory handicap, including two major Conferences on Problems of the Deaf and Hard of Hearing, again took an important step in this area of investigation with the calling of a Conference on Problems of the Deaf, in Washington, D.C., May 17-18, 1940. The program for this Conference had been prepared by a special organizing committee chosen by the Council, as follows:

Dr. Percival Hall, president of Gallaudet College, *chairman*
Dr. Knight Dunlap, University of California at Los Angeles
Professor Irving S. Fusfeld, Gallaudet College
Dr. Stacy R. Guild, Johns Hopkins University School of Medicine
Dr. Rudolf Pintner, Teachers College, Columbia University

Prior to the actual meeting a preliminary prospectus of research projects on deafness undertaken in various centers in recent years had been brought to the attention of those who were to participate.

The general plan agreed upon for the Conference itself was to have a number of chosen subjects presented by known experts, with a period of discussion for each in turn, with a final summing up and adoption of resolutions for further action. Under the chairmanship of Dr. Hall, the two-day session held to this plan so that it was possible to consider a careful review of research suggestions over almost the entire area of the problems of deafness.

Participants in the Conference

Dr. John E. Anderson, director, Institute of Child Welfare, Minneapolis, Minnesota.

Dr. Albert L. Barrows, executive secretary, National Research Council, Washington, D.C.

Dr. Willis C. Beasley, Division of Public Health Methods, National Institute of Health, Bethesda, Maryland.

Dr. Ignatius Bjorlee, superintendent, Maryland State School for the Deaf, Frederick, Maryland.

Mr. D. T. Cloud, managing officer, Illinois School for the Deaf, Jacksonville, Illinois.

Dr. Knight Dunlap, professor of psychology, University of California at Los Angeles.

Dr. Harvey Fletcher, physical research director, Bell Telephone Laboratories, New York City.

Prof. Irving S. Fusfeld, in charge, Research Department, Gallaudet College, Washington, D.C.

Dr. Elbert A. Gruver, president, American Association to Promote the Teaching of Speech to the Deaf, Philadelphia, Pennsylvania.

Dr. Stacy R. Guild, director, Otological Research Laboratory, School of Medicine, Johns Hopkins University, Baltimore, Maryland.

Dr. Percival Hall, president, Conference of Executives of American Schools for the Deaf, Washington, D.C.

Dr. Ross G. Harrison, chairman, National Research Council, Washington, D.C.

Dr. Elise H. Martens, senior specialist, Education of Exceptional Children, U. S. Office of Education, Washington, D.C.

Dr. Horace Newhart, president, American Otological Society, Minneapolis, Minnesota.

Dr. T. Ernest Newland, chief, Special Education, Department of Public Instruction, Harrisburg, Pennsylvania.

Dr. Rudolf Pintner, professor of education, Teachers College,Columbia University, New York City.

Dr. Frank H. Reiter, principal, Clarke School for the Deaf, Northampton, Massachusetts.

Mr. Arthur L. Roberts, grand president, National Fraternal Society of the Deaf, Oak Park, Illinois.

Dr G. Oscar Russell, director, Speech, Voice Science and Hearing Laboratories, Ohio State University, Columbus, Ohio.

Dr. J. C. Steinberg, Bell Telephone Laboratories, New York City.

Dr. Irvin Stewart, director, Committee on Scientific Aids to Learning, National Research Council, New York City.

Miss Josephine B. Timberlake, superintendent, Volta Bureau, Washington, D.C.

Dr. Gertrude Van Adestine, principal, Day-School for the Deaf, Detroit, Michigan.

Dr. William Charles White, chairman, Division of Educational Relations, National Research Council, Washington, D.C.

Friday Morning Session, May 17, 1940

The meetings of the Conference on Problems of Deafness were formally opened Friday morning, May 17, 1940, in the Board Room of the National Academy-Research Council Building, Washington, D.C., with Dr. William C. White, chairman of the Division of Educational Relations of the Council, as general chairman. Dr. White extended a cordial greeting to all the members attending the Conference on behalf of the Council, and turned the program over to Dr. Hall, who conducted the sessions through the major portion of the deliberations.

Dr. Hall, in an Introductory Statement, reviewed the rec-

ommendations of the previous Conferences for the discussion of research relating to deafness held under the National Research Council, called attention to the more notable recent advances in research activity on deafness, and suggested the lines that further advances may take. In summing up the research situation, Dr. Hall made mention of the fact that the Conference of Executives of American Schools for the Deaf as an incorporated organization has already furthered such progressive moves as certification of teachers in schools for the deaf, the setting of standards for the accrediting of teacher-training centers, and the adoption of standard definitions of deafness, and so is a body which "may well be called upon to stimulate and even to administer part, at least, of the future programs of research into problems of the deaf." Other promising fields of study, Dr. Hall further stated, lie in efforts to determine the prevalence of deafness among both adults and school children, in scientific medical progress in the amelioration of deafness, in inquiries into the specific personality aspects of loss of hearing, in school surveys, in the broad field of vocational preparation and adjustment, and in discrimination in occupations because of deafness.

The first paper to follow was one offered by Dr. Beasley, on Opportunities and Means of Research on Incidence of Deafness. In view of the decision of the Federal Bureau of the Census not to include a study of the deaf in the current national enumeration of the population, it seems that the study made by the National Health Survey in 1936 on the incidence of impaired hearing in the general population, along with the results obtained from information on loss of hearing collected at the two World's Fairs, provides the most systematic and representative information on this question so far gathered by any source.

In the National Health Survey the extent of hearing impairment was determined by a household inquiry method in 83 cities, the degree of deafness extending from partial deafness (in three stages, ranging from difficulty in understanding speech in large group activity to difficulty in hearing over the telephone) to total deafness to speech (after speech had

been acquired) and finally deafness at an early age in life. From these 83 cities, twelve were chosen for an intensified clinical investigation of hearing deficiency, yielding what is believed to be a representative cross-section study of hearing impairment in urban United States in 1936. It is felt that an intensive study of the tabulated statistics from this kind of survey will produce findings that may be regarded as typical with respect to the incidence of the various stages of acoustic disability within the environmental characteristics considered. It would seem further worth while in the interest of conservation of hearing to encourage research on incidence of deafness where close medical follow-up is possible in the same groups, both adult and children. Dr. Beasley concluded with the statement that perhaps the best opportunities for research in this field may be found in connection with large-scale physical or health examination projects in public schools, colleges, universities, industrial and business organizations, the national military bodies and community medical centers conducting large volume clinics. The results on the incidence of deafness could then on analysis be correlated with other differential trends, such as socio-economic status, race, and age. Another research factor to consider is the need of establishing standardized testing techniques.

Dr. Steinberg then told of the procedure employed at both World's Fairs by which it would be possible to reach a reliable estimate of hearing loss in the general population. In this hearing survey, over 500,000 records were obtained, including information as to sex, color and estimated age. Analysis of the data thus gathered reveals many phases of the hearing problem.

Dr. Newland told of an audiometric program instituted in the State of Pennsylvania in which some 250,000 children were tested at least for a first time, though it was not possible to carry out follow-up tests. At this point, Dr. Russell described the technique developed in his department at Ohio State University whereby it is possible to do rapid, yet effective, testing of hearing on a large scale among university students.

In a brief statement on Further Possibilities in the Study

of Heredity of Deafness, Dr. Reiter outlined the investigations begun by members of the psychology staff of Clarke School for the Deaf, tracing back the family ancestry of pupils and former pupils, in all involving approximately 22,900 individuals. These studies have branched out along three lines:

1. An investigation at Martha's Vineyard, the original home of the forebears of two former pupils, showing thirteen families closely intermarried,
2. An investigation in a community in Maine, an offshoot of the Martha Vineyard group, comprising a large family traced through eleven generations and
3. An analytical study of about 125 family trees of former and present pupils.

The data from all of these studies are to be summarized soon for publication.

Dr. Guild offered a number of observations on the occurrence of otosclerosis. This malady seldom is a cause of deafness in children. It is often loosely interpreted as including all hereditary deafness, which is not the case. On the other hand, studies by Dr. George E. Schambaugh and associates indicate hereditary factors play an important rôle, their evidence pointing to so high a proportion as one fourth the number of deaf children examined who had a definite history of hereditary origin of their deafness, and, further, among at least an additional two fifths of the total group heredity could not be ruled out of consideration as a cause of the deafness.

Speaking on the general subject of Future Research in the Prevention of Deafness, Dr. Guild pointed out that the restoration of good hearing to most of the severely deaf people by therapeutic measures, medical or surgical, is still very remote, because of the very nature of the causative lesions. The most logical line of amelioration is in the field of prevention. The first fact of importance to be noted is the general contribution toward the prevention of deafness by recent advances in preventive medicine.

The great preponderance of impairment of hearing falls within the range of slight to moderate loss, an impairment in high-tone perception and associated in childhood with obstructing growth in the naso-pharyngeal passages. An effec-

tive remedial measure, as practised in the Otological Laboratories of Johns Hopkins University has been found in radium-emanation treatment.

In a paper on Possible Research in the Determination of Deafness, Dr. Newhart pointed first to the need of agreement on standard definitions and endorsed those recently formulated by the Conference of Executives of American Schools for the Deaf. He then outlined the difficulties encountered in efforts to obtain accurate tests of hearing in young children, noting in particular the inadequacies of current phonograph audiometers for group use. Also a very recent wide-scale study carried out in the public schools of the city of Minneapolis indicated as high a proportion as 19.8 per cent of the children tested showed a significant loss in hearing ability, and that of this group those with high-pitch deficiencies were two and a half times as numerous as those with low-frequency impairment. Concluding, Dr. Newhart observed that there is urgent need for extensive research first to determine the incidence and significance of hearing loss, particularly in the higher frequencies in younger school children and, second, to devise adequate reliable and practical "screening" methods for large groups of school children, of persons in the college levels, and of workers in industry.

The problem of The Possibility of Improvements in the Measurement of Hearing was taken up by Dr. Fletcher. Referring to the frequent criticism of the use of the phonograph audiometer for large-scale testing, Dr. Fletcher stated that such a device was not originally prepared for absolute accuracy. Its use as a group instrument was planned entirely as a "screening" process, for certainly it would thus provide information that would not otherwise be easily available. It was essential that suspect cases be followed up with a more precise instrument, preferably a carefully calibrated pitch and tone differentiating audiometer. Finally, remedial measures should be applied as indicated in individual cases.

It seems hearing first begins to weaken in the 5,000 cycle range. This, Dr. Fletcher felt, would be the major criterion if a device for measuring the hearing were to be based on a single frequency.

FRIDAY AFTERNOON SESSION, MAY 17, 1940

The second session of the Conference on Problems of Deafness was held on the afternoon of Friday, May 17, 1940. The first problem presented, that of satisfactory mechanical hearing aids, aroused unusual interest. Miss Timberlake opened the discussion with a paper, Studies of Hearing Aid Efficiency for Hard-of-Hearing Persons. In this she recounted her own experiences in the use of special mechanical individual aids, an experience that has seen the development of devices over the entire range from uselessness and high-fatigue tension to what may now be considered workable and satisfactory.

With respect to group instruments, Miss Timberlake was of the opinion that available devices are on the whole satisfactory, though the major difficulties continue to be maintenance and lack of skilled teaching in their use.

On visits to various schools which had installed group aids, Miss Timberlake had found the factors of distortion and mechanical defect widely prevalent. A careful daily check-up of the instruments should be a necessary condition for their use, and one of the requirements of every special training course should include knowledge in the management of hearing aids.

In addition to the possibilities in group mechanical aids, individual hearing aids for use in schools already give promise of unusual value in the training of residual hearing and in the acquiring of language. Finally, Miss Timberlake suggested the advisability of conducting experimentation in which, under carefully devised control conditions, wearable vacuum-tube instruments would be used, in and out of the classroom, by children who had already used group instruments in the classroom for several years. The purpose of this study would be to determine the best hearing-aid procedures in relation to the school situation.

The suggestion by Miss Timberlake was fully endorsed by Dr. Fletcher, namely, to set up an exhaustive experiment, not with the ordinary commercial group and individual hearing aids, "but to go ahead and make the best that can be made in order to try the experiment." Dr. Fletcher contended,

however, that the project would be doomed to failure if it were sponsored by any one hearing-aid manufacturer. To succeed, it would have to have the support of a disinterested agency. The aim would then be to construct the best possible kind of equipment, and subject it to thorough trial under control experimental conditions in the school.

The point was raised by Dr. Newhart that the effect of hearing aids would be especially pronounced if young children could be trained in their use even before reaching schools for the deaf; in fact, there is likelihood they would not then need to enter such schools. Also stressed by the speaker was the urgency of protecting children in the "borderland" of hearing ability; that is, affording protection against ailments involving naso-pharyngeal and middle-ear disturbance, and avoiding exposure to epidemic diseases.

Mr. Cloud admitted that some of the drawbacks in the use of hearing-aid equipment are the high cost of maintenance and the interruption to continued aural work caused by frequent need for repairs, but contended also that the values derived from this part of the school work still warranted promoting it.

The suggestion was made by Dr. White that for the project outlined by Miss Timberlake and Dr. Fletcher it may be possible to enlist the interest of the National Research Council Committee on Scientific Aids to Learning.

Dr. Dunlap referred to the possibility that investigation into problems raised by deafness may produce conclusions of value to the field of psychological study in general. In particular, since deafness supposedly imposes a certain degree of social isolation, and with it "emotional problems," studies in this field may be fruitful in suggestions for the study of social maladjustment in general, since, as Dr. Dunlap contends, "the results of social isolation from one source are not very different from the results of social isolation from other sources." There is also a certain kinship between the problem of speech teaching to the deaf and that of speech correction in general as well as in problem cases. Further, the non-reader in the public schools has in recent years been the subject of much scientific interest and Dr. Dunlap was

of the opinion the motor-method of language learning, particularly where the sign language or manual alphabet is employed, may prove a valuable lead toward the solution of this problem.

A handicap to progress in co-operative research between university centers and schools for the deaf is to be noted in the failure of the latter to provide a place for trained psychologists on their staffs. This was the opinion of both Dr. Dunlap and Dr. Pintner.

On the subject of a Research Program for the Further Study of Deaf Children of Preschool Age, Mr. Cloud told of the experimental activity in this field conducted over a period of four years in the Illinois School for the Deaf, "to determine the feasibility of maintaining such a department in a residential school for the deaf, with all that this implies in general living conditions, selection of personnel fitted by training and experience in both preschool work and the special field of the education of the deaf, materials and proper facilities." A second objective in the undertaking was to determine "the effect of such training on the subsequent progress of these children in their regular school work as compared with two control groups: Deaf children entering school for the first time and preschool-age hearing children." After prepared test findings had been made and the subsequent school progress of the children evaluated, "the general inference was drawn that a formal school environment is not on the whole conducive to best results and that a home environment with a learning atmosphere appears to be a prerequisite." With a reorganization of the same school program effected so as to provide this "prerequisite" it was Mr. Cloud's judgment that the "advantages accruing from such training were such as to justify the venture and to establish the principle that preschool training definitely promotes growth and offers a progressive approach to the problem of the education of the deaf." For this reason Mr. Cloud felt the preschool problem in this special field to be one that could be fruitfully explored under more central, and perhaps broader, auspices than are possible in a single school for the deaf, auspices permitting, for one thing, the co-ordination of

activity of other experimental centers interested in the same problem, mainly in procedures, assembling of data and the deriving of comparisons and final judgments.

In a paper on Research Suggestions for a Comparison between Very Young Deaf and Hearing Children, Dr. Anderson reviewed first the major conclusions derived from the research activity of recent years on the problems of deafness. These conclusions may be summarized as follows:

1. Loss of hearing is a specific defect in itself unrelated to other deficiencies or inadequacies in the psychological structure.
2. From the findings of intelligence tests, it appears that the effects of hearing deficiency are "specific only for those functions which are intimately tied in with language and for which hearing is the most important sensory inlet."
3. There are apparently no significant differences between deafened and normal children in motor abilities.
4. Defective hearing apparently results in an increased emotional tension and hence in a less successful personality adjustment.
5. Measures of social competence indicate that deafened children manifest greater withdrawal tendencies, and more shyness, and are less effective in making contacts with others, and, further, such tendencies are likely to be more marked among children in residential schools for the deaf.
6. The effects upon behavior seem to be more pronounced when hearing deficiency appears at any early age.
7. The quality of a person's speech seems to bear a direct relationship to degree of hearing.
8. Marked progress in general reactions, in emotional, personal and social adjustment, and in lingual ability, follows upon prompt discovery of hearing deficiency and subsequent thoroughness of special training.

From these points in turn emerge two major considerations: First, the major effect of loss of hearing is a lessening in ability to maintain communication with others; and second, this primary disability results in certain secondary effects in the areas of emotional, personality and social adjustment. The practical dictate of these considerations is to seek an early stimulation of spontaneous communication with others and particularly with others who are not similarly handicapped.

Dr. Anderson's specific suggestion for research in this field would be a set-up for comparative study of groups of deafened and non-deafened children in which both types would spend a portion of each day in a common play program and a portion in appropriate special and non-special instruction,

respectively, supplemented by further comparative study in which equated groups of deafened children, one at three years of age and one at eight years of age, are subjected to a highly stimulative type of training over a period of years. In all of these suggested research undertakings, the training, according to Dr. Anderson, should be highly charged with language experience. Finally, at designated intervals a broad program of measurement of all aspects of child life would be administered to determine outcomes.

Referring to the great changes that have taken place in the education of the deaf over the past half century and more—with the admonition that there is no certainty as yet that all of these movements are error-proof—Dr. Gruver, in a paper on Research Possibilities for Advancement of Educational Methods in Schools for the Deaf, asserted there is compelling need of subjecting a large share of present-day educational policy to evaluation by the refined techniques of research. Among the lines which he singled out as being in special need of examination are the current practices in auricular instruction, visual instruction, religious instruction, sex instruction, teaching methods with slow deaf children, procedures with preschool deaf children, and chapel exercises.

Other questions which Dr. Gruver regarded as productive for research activity included these:

> What influences do teacher-training and summer schools have on methods of instruction?
>
> To what extent do parent-teacher organizations, publications, conventions, associations, field workers, labor agents and legislation influence methods of instruction?
>
> What is the effectiveness of methods employed in vocational instruction; *to wit,* in methods of presenting subject matter, methods of communication between teacher and pupil, and methods of teaching shop language?

Dr. Van Adestine brought up for consideration the subject of a Comparative Study of Progress of Acoustically Handicapped Children in Public Schools for the Hearing. According to the plan worked out in the city of Detroit, the problem of children with failing hearing in the public schools is dealt with according to a systematically organized program. This procedure is carefully documented with records at every

step, so that over the course of time significant comparisons may be made and a proper corrective policy established. In the first place, when anywhere in the public schools it is suspected that a child who is failing in his school work may be the victim of loss of hearing power, he is sent to the city day-school for the deaf where a clinic is maintained especially for the purpose of providing a full test and case history on hearing. Preliminary to this special testing, a complete record is obtained from the school from which the child has come, giving rating and information on his personal history, progress, and activities.

After the clinical examinations are completed, the total information already gathered about the child is weighed carefully, medical relief as indicated is prescribed and a recommendation for educational placement is made. If he is sufficiently handicapped in hearing, he may be assigned to the day-school for the deaf for trial and observation; if not he may remain in his own school, with the additional training of lip-reading, though not returned to the original room where his failure had become so pronounced. After special remedial guidance which includes language development, lip-reading and speech correction, the pupil may be returned to work again with normal hearing pupils.

Saturday Morning Session, May 18, 1940

Dr. White, who called the Conference to order for the Saturday Morning Session, May 18, 1940, proposed that on adjournment of the session, the original directing committee be continued, charged with the duty of studying the report of the deliberations of the Conference and later submitting practical suggestions in writing, as it deems necessary, for final consideration by all the members of the Conference, possibly through correspondence. On suggestion by Dr. Guild, it was agreed that Dr. Fletcher be added to the directing committee. Dr. Fletcher then proposed that following the reading of the remaining papers, the members formally submit for consideration by the entire body such recommendations as they may regard as practical and worthy research undertakings. These recommendations, Dr. White added,

might then be left with the committee for final action.

Dr. Hall then assumed the chair.

Dr. Newland, in a paper on Studies to Be Made in the Proper Methods of the Assignment of Children to Special Schools, offered the following suggestions:

1. The development for use on the deaf of learning capacity tests having acceptable validity and reliability.
2. The development of measures of social maturity and the determination of the significance of such measures of candidates of varying age levels.
3. The determination of weightings of various traits bearing upon the admissibility of candidates of varying ages to residential schools for the deaf and hard of hearing.
4. The further consideration of the reliability and validity of individual audiometric measurements.
5. Comparison of the personality adjustments of the deaf and hard of hearing educated in residential schools for varying lengths of time with those of the deaf and hard of hearing educated in modified day-school programs for varying lengths of time.
6. Determination of desirable ages at entrance into various methods of instruction.
7. Determination of the values of motion picture tests of speech reading and other measures of achievement in the transfer to regular public school programs of deaf and hard-of-hearing children educated in special schools.

Dr. Russell, speaking on Further Researches in Tests of Lip-Reading Ability, called attention to the astounding improvement in reading and other subjects which resulted as a direct outgrowth of the scientifically standardized achievement test movement in the field of education. Similar results might well be anticipated with the construction of really objective, standardized tests in speech, visual hearing, training in residual auditory perception, and achievement in every subject taught the deaf child providing they were consistently, systematically and widely utilized. In a number of instances, promising attempts to evolve lip-reading (better called visual-hearing) tests have already been made; the most recent being those based on a motion-picture technique.

A technique for an effective state-wide survey of the hearing of school children was described by Dr. Bjorlee. This was a description of a study completed within the past two years in public schools of the State of Maryland under the direction of Dr. Bjorlee, and with the active co-operation of the State Department of Education and the State Department of Health. Two groups of children were included: First,

all pupils in the second, fifth and eighth grades in all public schools for white children of the State of Maryland, exclusive of the city of Baltimore; and second, all pupils in other grades who for any reason were thought to have a deficiency in hearing. It was possible in this way to have a total of 41,023 children given an audiometer test under a uniform procedure by a trained examiner. It was felt the results of such an investigation, including the pupil case history information collected, could yield data of great importance in dealing with the problems of deafness.

After giving some details of the findings derived from this investigation, Dr. Bjorlee emphasized the need of agreement upon standard nomenclature and definition as a prerequisite for scientific study in the field of auditory handicap. In this connection he noted the series of definitions on deafness adopted by the Conference of Executives of American Schools for the Deaf.[1]

Supplementing this paper, Dr. Bjorlee offered another statement, on a Certification Plan for Teachers and Training Centers for Teachers of the Deaf, which explained efforts made in the past few years to set more adequate standards for teaching, as evidenced by the growth of the plan established by the Conference of Executives of American Schools for the Deaf of certifying instructors in schools for the deaf, and by the gradual increase in the number of centers that have accepted the standards for training set by the same central organization.

Dr. Martens proposed, in a paper on Problems Related to Teachers of the Deaf, that objective comparison be made of "the preparation and status of teachers of the deaf with the preparation and status of teachers of hearing children or an evaluation of the present arrangements for certification of teachers of the deaf as compared with certification requirements in the respective States for teachers of the hearing."

For this purpose Dr. Martens submitted a series of questions about which such a program of comparison could be conducted, as follows:

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[1] See ANNALS, January 1938 (vol. 83, no. 1), pp. 1-3.

1. What have been the actual preparation and experience of teachers (a) in residential schools for the deaf; (b) in day-schools for the deaf and hard of hearing within the same state? What significant similarities and differences does a comparison of the two groups bring to light?
2. Is there any differentiation in the training and status of the personnel employed for teaching the deaf on the elementary level, on the one hand, and on the junior high school or high school level, on the other hand?
3. How many teachers of the deaf and hard of hearing have had previous experience in teaching hearing children? Is such experience desirable?
4. How do teachers of the deaf in residential schools compare with teachers in day-schools of the same State in matters of professional status and improvement, as indicated by such items as (a) salary; (b) tenure; (c) retirement provisions; (d) opportunity for promotion; (e) association with professional organizations; (f) summer school study; (g) contacts with general educational groups?
5. What elements in the pre-service preparation needed by teachers of the deaf would be valuable also for teachers of hearing children? What phases of the pre-service preparation of teachers of hearing children would be equally valuable for teachers of the deaf?
6. In which States are the certification requirements for teachers of hearing children in the day-schools applied, with adjustments, to teachers of the deaf and hard of hearing (a) in day-schools; (b) in residential schools? What are the requirements which such States enforce?
7. Should the same basic certification requirements apply to teachers of all these groups, with adaptations or additional training in keeping with the needs of the acoustically handicapped? Or are the teaching problems of the deaf sufficiently different to warrant a different set of requirements without regard to the certification requirements of the State for teachers of all children?

Dr. Martens then offered a mode of approach to the questions as outlined, to include: 1. Status studies, in which comparative information is to be obtained concerning both teachers of the deaf and teachers of hearing children; and 2. Evaluative studies in which the two types of teachers are to be compared in the chosen variables according to the best techniques of educational research. The suggested approach would also involve "an analysis of children's needs in terms of specific teaching activities, an identification of those needs which are common to deaf and hearing alike, as well as of those that are different, and an appraisal of classroom activities and teacher-training courses on the basis of the extent to which they give attention to such needs."

A detailed procedure for research along three major lines was proposed by Dr. Pintner: On the use of individual hearing aids for hard-of-hearing children in school; an adequate

testing program for schools for the deaf; and inquiry into the intelligence and educational achievement of deaf children. These three fields were marked off by Dr. Pintner, not only as to nature of the problem but also as to method, in the following manner:

Plans for Research

I. The Value of Individual Hearing Aids for Hard-of-Hearing Children in School

Questions

1. Do hard-of-hearing children who wear individual hearing aids during their class work in school make greater progress in educational achievement than control children who do not wear such aids?
2. What changes, if any, in feelings of satisfaction, in happiness, in general adjustment and in personality traits accompany the wearing of such aids?

Procedure

1. Give a battery of tests to about 1,000 hard-of-hearing children, ages ten to twelve inclusive:
   1. Audiometer tests
   2. Intelligence, verbal and non-verbal
   3. Educational achievement
   4. Personality and adjustment tests
2. Equate two groups of about 300 each, with means and sigmas equal, as to:
   1. Hearing loss
   2. Intelligence
   3. Educational achievement
   4. Personality and adjustment
   5. Age
   6. Sex
   7. Social status
3. Have the experimental group equipped with suitable hearing aids prescribed by competent otologists. Allow the control group to continue without such aids.
4. Test both groups after six months, twelve months, 24 months, and as long thereafter as possible with all possible types of achievement, intelligence and personality tests.
5. Select a small sample of the experimental group for individual case study by a clinical psychologist in order to determine in greater detail the attitudes and feelings aroused in the children by wearing hearing aids.

II. The Construction and Installation of an Adequate Testing Program for Schools for the Deaf

1. Assemble, try out, construct and standardize new tests, where necessary, in the following areas:
   a. Intelligence
   b. Educational achievement tests to measure all the knowledge and skills taught in schools for the deaf, *i.e.*, language, speech, lip-reading, etc.
   c. Personality and adjustment tests.
   d. Special abilities, such as mechanical ability, artistic ability, etc.

e. Vocational interest tests

2. Conduct experimental surveys in two or three schools, modifying the testing program in the light of such practical exigencies as may arise.
3. After a satisfactory testing program has been achieved, carry it out in several schools in order to obtain tentative norms for the deaf.
4. Install a testing and guidance program for continuous service in each school that has been surveyed.

III. The Intelligence and Educational Achievement of the Deaf Child in the United States

Problems

1. To establish more thoroughly our knowledge of the intelligence and general educational achievement of the deaf.
2. To obtain a complete sample of one or two age groups.
3. To compare the results with the National Research Council Survey of 1924-1925.

Procedure

1. Select one or two age groups, *i.e.*, ages 12-0 to 12-11, and also 10-0 to 10-11.
2. Give a group non-language intelligence test and a group educational achievement test.
3. Tabulate the results to find the distribution of intelligence and achievement.
4. Study the relationship between intelligence and achievement and such factors as cause of deafness, age of loss of hearing, amount of loss, and so forth.
5. Compare the results with the last survey, raising the question as to the improvement of educational achievement since the last survey.

In the discussion which followed the presentation of Dr. Pintner's plan for research, the suggestion was made that it could profitably include a follow-up study, with a re-test technique, of children who were included in the original nation-wide survey of schools for the deaf conducted under auspices of the National Research Council in 1924-1925.

As a means of obtaining a measure of the efficiency of schools for deaf children, and seeking at the same time the improvement of that efficiency, Professor Fusfeld, in a paper on Need of a Survey Technique for Schools for the Deaf, offered an outline of procedure by which that type of investigation could be implemented. It would be a research achievement to perfect a procedure for this purpose, and in accord with this thought, Professor Fusfeld suggested the following core of headings about which such a pattern of investigation might take form:

1. The Managing Authority of the School for the Deaf, in its Administrative and Custodial Phases
2. The Physical Set-up; that is, Grounds, Buildings, Equipment

3. Support; *i.e.*, Finances
4. The School Program; *i.e.*, Academic and Non-Academic, Vocational
5. The Teaching Staff; *i.e.*, Personal History, Training, Efficiency
6. The Pupils; *i.e.*, Nature—inherent and acquired, Achievement, Outcomes

Some of the special problems with which the adult deaf must contend were touched on by Mr. Roberts in a paper, Ascertaining Vocations Best Suited for the Deaf, and Suggested Study of Discrimination Against the Deaf in Employment and Insurance. Suggestive for research consideration would be such questions as the basic difficulties the deaf encounter in the vocational world and possible means of lessening these difficulties; special abilities of the deaf; the most effective type of vocational program, *i.e.*, to develop general aptitude and adaptability or to teach a specialized trade; the reaction of deafness on personality, particularly in relation to the vocational situation; and the vocations best suited for the deaf, including thorough follow-up after training has been completed. Further questions for study would include life and accident insurance data, *i.e.*, ratio of actual to expected mortality for deaf persons; incidence of liability of deaf workmen to vocational accident; and incidence of accidents among deaf drivers. In this connection, also, Dr. Martens described a study of the deaf and hard of hearing in the occupational world carried out in the period 1934-1935 by the U. S. Office of Education with the aid of the Civil Works Administration.[2]

Final Discussion and Conclusions

The remainder of the Conference session was devoted to a general summation of opinion and the adoption of resolutions for further action.

Among the topics mentioned as likely undertakings for research, but not as yet discussed in the Conference, were these: Speech production in the congenitally deaf, language acquisition by the deaf pupil, the writing and reading proficiency of deaf children, the fundamental values of silent

[2] The Deaf and Hard-of-Hearing in the Occupational World, U. S. Department of the Interior, Office of Education Bulletin, 1936, No. 13.

reading as a program of instruction, the effect of the progressive education movement, and finally the problem of curriculum development in schools for the deaf.

The first motion, proposed by Dr. White, and adopted was to the effect that Professor Fusfeld be asked to prepare a paper for general distribution on the subject of surveys of schools for the deaf, describing the necessary preparation and technique by which such studies could be conducted, and that it was the sense of the Conference that the cost of such surveys should properly be borne by the schools desiring, and benefiting from, such service.

The conference then proceeded to the adoption of a series of proposals, by formal vote, as follows:

A motion, presented by Miss Timberlake, on a study of the effectiveness of hearing aids in schools for the deaf, namely:

> That the conference recommend a research study of the effectiveness of hearing aids and their relationship to acquisition of language, knowledge, personality adjustment, speech and lip-reading among children in schools for the deaf.

A motion, offered by Dr. Fletcher, on the plan of research laid out by Dr. Pintner on the value of individual hearing aids for hard-of-hearing children in school, *to wit,*

> That the conference approve the plan of research upon the value of individual hearing aids for hard-of-hearing children in school, as submitted by Dr. Pintner, and that the committee be requested to take such steps as are necessary to carry the program into effect.

A motion, parts (a), (c) and (d) submitted by Dr. Beasley, and part (b) by Dr. Fletcher, on screening tests:

> That the conference recommend,
> (a) Immediate steps be taken to carry out a research project specifically for the purpose of screening tests;
> (b) The chairman of this conference appoint a committee of three to examine methods of finding hard-of-hearing school children, and to make recommendations to the National Research Council for apparatus and procedures.
> (c) The Council take such action as appears feasible to accomplish the recommendations of this investigating committee, so that the project may get well under way during the coming school year;
> (d) These recommendations be referred to the Committee on Physical Therapy of the American Medical Association for concurrence by that Committee, which is actively interested in that problem.

On adoption of his motion, with the proviso suggested by Dr. Fletcher, Dr. Beasley offered the following outline of

factors that could be considered in any effort to carry out the plan described:

(a) What tones shall be used? Intensity, ranges and intensity scale divisions? Of other instrument characteristics;
(b) Testing procedures and environmental characteristics;
(c) Method of classifying types of hearing defects disclosed by such tests, with recommendations for classes that shall be referred for medical and diagnostic audiometric examination;
(d) Techniques and procedures that should be used in typical school surveys to provide for follow-up examinations, medical and other, to insure most favorable disposition of each case of impaired hearing disclosed by the screening tests.

On motion, by Dr. Russell, to carry out recommendations II and III in the plan proposed by Dr. Pintner, with the addition by Dr. Anderson of a plan to follow up studies previously completed:

That this conference recommend to the National Research Council that a committee be appointed to consider ways and means for undertaking the second and third parts of Dr. Pintner's suggested program of research, including in the third project suggestions which have been made at this conference of a study in adult life of the children who were included in the survey which was made under the auspices of the Council in 1924-1925.

Two motions, by Dr. Steinberg, on a particular group-aid research study, and inquiry into incidence of high-tone deafness in school children with stated equipment:

That this conference recommend, as part of a research study on the effectiveness of teaching the deafened, that a specific research project be undertaken involving the installation of a research type of group aid in a particular school for the deaf, and that it is the sense of this conference that such a specific project might properly come under the auspices of the Committee on Scientific Aids to Learning.

That this conference recommend to the National Research Council that it, in turn, recommend to the United States Public Health Service that a study be made of the incidence of high-tone deafness in school children in relation to throat disorders, and that this study be undertaken in part in certain localities by utilizing hearing test equipment that is installed in the Chicago Museum of Science and Industry, in the New York Museum of Science and Industry, and in the Franklin Institute in Philadelphia.

Moved by Dr. Newhart on the teaching of otology to medical students:

That this conference recommend to the National Research Council that in view of the high incidence of hearing deficiencies disclosed by accurate audiometric tests, especially among school children, and an urgent demand for the early detection, correction and amelioration of existing and potentially handicapping hearing defects, that it recommend to the Council on Medical Education of the American Medi-

cal Association and the Association of American Medical Colleges that early provision be made in the teaching of otology to undergraduate students for adequate instruction in the fundamental principles relating to the early detection, prevention and amelioration of auditory handicaps by modern methods.

In connection with the last motion, it was further voted that Dr. Newhart be empowered to draw up a resolution based on its provisions, to be presented to the American Medical Association at its forthcoming meeting in New York in June 1940.

It was also voted that the directing committee of the present conference serve as a continuing committee to make recommendations concerning other points that may be suggested by the deliberations of the conference.

Whereupon, with an appropriate expression of appreciation by Dr. White, on behalf of the National Research Council, of the services rendered by the organizing committee in formulating the program of the conference; by Dr. Hall, its chairman; and by all the participating members of the conference, the Conference on Problems of Deafness was adjourned.

Appendix

In accordance with the procedure previously agreed upon, the continuing committee submitted a supplementary list of suggestions for research consideration, namely:

A

Additional Suggestions That Might Be Made to the National Research Council

By the Conference on Problems of Deafness

1. The conference suggests that the National Research Council call to the attention of the Public Health Service its interest in definite studies of the influence of diet in connection with the proper functioning of the organs of hearing and express the hope that such definite studies may be made by national or state health services.
2. The conference calls the attention of the National Research Council to the growing demands for liability insurance for drivers of automobiles and it suggests that the National Research Council urge the National Fraternal Society of the Deaf to continue its studies of accidents to deaf drivers with the view to sending to liability companies accurate statistics on this subject.
3. The conference suggests to the National Research Council that the State Labor Departments throughout the United States be informed that special bureaus for the employment of the deaf have been established in Minnesota, Michigan, North Carolina, and pos-

sibly other states and that a study should be made of the results of the activities of bureaus already established, with a view to proving the desirability of establishing them elsewhere.

4. The conference finds that in spite of preliminary work with deaf children of the nursery school age at certain institutions for the deaf, there has not yet been made a sufficient study under most favorable conditions, with well chosen controlled groups, to bring out definite conclusions as to the advantages or disadvantages of nursery schools for deaf children. The conference therefore recommends to the National Research Council the carrying out of a careful study of this subject with the co-operation of the Conference of Executives of American Schools for the Deaf.

B

Bibliography of Publications on Problems of Deafness by the National Research Council

1. Richardson, C. W. and Schambaugh, G. E., *et al.*, The Physical Causes of Deafness. Report of the Committee on the Physical Causes of Deafness, Reprint and Circular Series of the National Research Council, No. 82; American Medical Association, Chicago, publishers, 1928.
2. Day, H. E., Fusfeld, I. S. and Pintner, R., A Survey of American Schools for the Deaf. National Research Council, Washington, D.C., 1928.
3. Conference on the Problems of the Deaf, Washington, D.C., January 20-21, 1928. Division of Anthropology and Psychology, National Research Council, Washington, D.C., 1928.
4. Research Recommendations of the Second Conference on Problems of the Deaf and Hard of Hearing. Reprint and Circular Series of the National Research Council, Washington, D.C., 1929.

Reviews of Publications

How to Help Your Hearing, by Louise M. Neuschutz. 1940. Harper and Brothers, New York. pp. ix-xx, 179.

From the depths of her own experience in the world of silence, Mrs. Louise M. Neuschutz, author and pioneer worker in the re-education of the deafened, has recently published a book, *How to Help Your Hearing*. In this volume Mrs. Neuschutz brings together a good deal of the present-day knowledge in aid of those deafened between the age of puberty and all the years of adulthood. The major theme stresses the need of building for the deafened a psychological morale to enable them to establish the most effective attitude toward their handicap, leading to a mastery of that handicap.

Written frankly in a tone of advice, yet gently given, the book develops the central argument that hope, not despair, can be the lot of the deafened person. In this task it considers in turn such points as meeting the problem, adjusting to the world about oneself, keeping mentally and physically fit, providing for one's own "good company" by satisfactory hobby growth, and finally wholesome suggestions for those with normal ears but who, in their children or in themselves, may have to deal with the sinister appearance of deafness.

The author tells of noteworthy progress in the fields of otology and psychology, and discusses mental attitudes and the problem of personality adjustment, the choice and use of hearing aids, lip-reading, acoustic training, and various methods of training the mind to utilize the remnants of hearing. A note of optimism marks the chapters on study and careers in which the deaf may engage. A succession of case-history anecdotes to prove the point enriches the general discussions. In short, according to Mrs. Neuschutz, a corrective philosophy will bring real compensation.

A handy bibliography, an appendix which includes detailed exercises for speech drills, ear training, discrimination, rhythm study and phrase identification, and an index, close this very timely and useful book.

In a Foreword to the book, Walter B. Pitkin outlines the social seriousness of the problem of the deafened and commends this portrayal and program laid out by Mrs. Neuschutz for its alleviation.

How to Help Your Hearing is published by Harper and Brothers, New York City. Its price is $2.50.

I. S. F.

Complete Guide for the Deafened, by A. F. Niemoeller. 1940. Harvest House, New York. pp. 256.

With recently aroused public interest in the problems of deafness has come a welcome increase in the literature published in this field for the average citizen. One such work is a book entitled *Complete Guide for the Deafened,* by A. F. Niemoeller, writer of books on health subjects for general readers.

In a succession of brief but pithy chapters, 77 in all, the author takes the reader over a course of topics that very nearly comprise the total problem confronting the hard of hearing. Following a Foreword by Dr. Harold Hayes, noted otologist and active leader in the American Association for the Hard of Hearing, the subjects treated in the book deal with the physical aspects of auditory difficulty, the physiology of deafness, the common causes and forms of progressive hearing loss, the part played by disease, diet, glands, drugs, heredity, old age and psychological factors. The book also considers "cures" so-called, audiometric measurement, educational aid, mechanical hearing aids, recreation, how to take advantage of the ordinary means of communication, the values of lip-reading, the organizations of the hard of hearing, and methods of conservation of hearing. And finally, as the author finds the psychological factor an important one, the book devotes a good deal of attention to the problem of personal adjustment.

The publishers of this very readable and instructive work are Harvest House, 70 Fifth Avenue, New York City, and its list price is $3.00. The publishing firm is one that specializes in books on health and beauty subjects.

I. S. F.

Handbook of Hearing Aids, by A. F. Niemoeller. 1940. Harvest House, New York. pp. 156.

As a companion work to *Complete Guide for the Deafened,* Harvest House has also published another book, *Handbook of Hearing Aids,* by the same author, A. F. Niemoeller. This second book is intended as a compendium of practical advice for the great numbers of hard-of-hearing persons who unaided cannot evaluate properly the numerous hearing devices now available.

With the same concise type of treatment, in 31 short chapters, the author, according to Dr. Harold Hayes who here also contributes a Foreword, "certainly tells the whole story about hearing instruments." The style is unencumbered with heavy technical description and should make effective advice for those in need of such help. The book of 156 pages discusses the various classes of mechanical and electrical aids, the principles underlying their construction, the special uses they may have, how their value may be judged, facts concerning their manufacture, and comparative price ranges. The preparation of this type of book is a novel undertaking, but nevertheless should serve a very useful purpose.

Its list price is $3.00.

I. S. F.

Studies in the Psychology of the Deaf, by the Psychological Division, Clarence W. Barron Research Department, Clarke School for the Deaf. 1940. The American Psychological Association, Inc., Columbus, Ohio. pp. i-vii, 153.

A contribution of distinction is contained in a report, *Studies in the Psychology of the Deaf,* from the Psychological Division of the Clarke School for the Deaf, published by The American Psychological Association, Columbus, Ohio, in Volume 52, No. 1 (Whole No. 232, 1940) of its Psychological Monograph Series.

This report collects in one volume the results of the research projects undertaken in the Clarke School since the establishment of its research department in 1928. The first of these is a brief summary of preliminary investigations of

the intellectual development and thinking processes of deaf children by Dr. Margarete Eberhardt. With the exception of one paper on Vocalizations of Preschool Deaf Children, by Miss Jean L. Sykes, the remaining portions of the report tell of the studies made since 1930 by Dr. Fritz K. Heider in collaboration with Mrs. Grace Moore Heider.

The first of the Heider studies is on a Comparison of Color Sorting Behavior of Deaf and Hearing Children. Taking their suggestion from studies of aphasics—that is, persons in whom is manifested a language disorder—who experienced difficulty in selecting a series of related hues even though they were able to match single colors, the Clarke School investigators sought to determine, by a series of color matching experiments, if deaf children in whom language difficulties are also common are likewise subject to the type of behavior observed in aphasics. Their results showed: 1. Deaf children chose colors over a wider range of hues than did hearing children of the same age; 2. for both deaf and hearing children in the younger ages colors were selected over a wider range of hues than was true for older children; 3. the experiments indicated the color matching behavior noted in aphasics who tended to regard hues as distinct and separate classes of colors was not present in the deaf children; 4. a knowledge of the names of colors apparently had no effect on the selections made in the color sorting experiments. The conclusion derived here is that the thought processes of the deaf child, as seen in the color-sorting tasks, before he begins the use of verbal language, is essentially similar to those of the hearing child.

In another study, of the phonetic symbolism of deaf children, the investigators sought to explore the possibilities that deaf children in acquiring speech also gain distinct sensory impressions corresponding to the meanings which hearing persons may derive intuitively from the phonetic character of words. Using for this purpose a series of paired words in English, French and German in a succession of experiments, it was discovered that deaf children may experience the symbolic character of their own speech, that in many cases this experience resembles that of hearing

persons, and that in some instances a difference may exist in the symbolic character of phonetic combinations as between deaf and hearing persons. The differences that do exist may be due to the lack of hearing as a sensory aid and to the greater rôle played by the kinesthetic as an interpreting agency. The difference may further indicate that part of the inaccuracies in the speech of deaf children may be due simply to a symbolic pattern which they have established subjectively, rather than to inadequate memory of what has been taught.

The next study in the report relates to a Comparison of Sentence Structure of Deaf and Hearing Children, made from compositions written by groups of deaf and hearing children after they had viewed a short motion picture. In the main this resolved itself into a quantitative analysis of the difference between the two types of children in their written response, and the net outcome appears to be the following assumptions: Deaf children write shorter sentences, in number of words and in number of clauses; they use relatively more simple, fewer compound and fewer complex sentences; they use fewer verbs in subordinate and coordinate clauses, but more in the main clauses; they use more infinitives, but fewer gerundive and participial constructions than do the hearing children; no marked difference is revealed in length of composition and in length of clause; and in general the written work of deaf children shows a likeness to that of younger hearing children. The conclusions showed further the deaf used more of one kind of construction and less of others than did hearing children when the various kinds of subordinate clauses used were considered. Analysis of the various types of subordinate clause used, in terms of relative difficulty, revealed differences corresponding to differences in frequency of use. Corresponding differences were also obtained in the comparison of the ways each of the different subordinate forms was used by the two groups of children.

The last of the studies contributed to the report by Dr. and Mrs. Heider deals with An Experimental Investigation of Lip-Reading, along principally four different lines: 1. By

tests of lip-reading, using a motion-picture technique; 2. by analysis of the relation between achievement in lip-reading and in other school subjects; 3. by a study of the relation of lip-reading of general matter to lip-reading of single elements; and 4. by a study of rhythm and lip-reading ability.

The conclusions derived from this last study may be summed up in this wise:

1. The motion-picture method of testing was found to be highly reliable.

2. A high correlation was revealed for lip-reading performances over periods of several years.

3. There is great individual difference in lip-reading in children of the same chronological age.

4. There was only small difference between the mean scores of consecutive age groups.

5. The individual differences could not be held due to difference in length of training.

6. A significant correlation ($r = .54$) was found between lip-reading results and educational achievement. This correlation rose even higher, (.64), when lip-reading and language scores were the variables.

7. High correlation was revealed between lip-reading ability and ability to recognize vowels, and higher still when recognition of consonants was the second variable.

8. Lip-reading ability and ability to follow a rhythm in dance or gymnastics showed correlation.

9. General lip-reading and lip-reading of nonsense syllables showed no correlation.

The section of the report dealing with A Study of the Spontaneous Vocalizations of Young Deaf Children refers to work done at the Clarke School by Miss Jean L. Sykes in preparation for a Master of Arts thesis in Smith College. This comprised an investigation, by the observation technique, of 14 young deaf children in two beginning classes of deaf children ranging in age from 3:10 to 6:10. Records were kept of the vocalization of the children in their free play and in an experimental situation, to discover the nature and frequency of the sounds occurring in spontaneous ex-

pression. The data thus obtained revealed, on analysis, the following, quoting the report:

1. With the exception of five consonants,[1] the range of vowels, diphthongs, and consonants recorded for the group of deaf children included all those of standard English speech.
2. The indefinite vowel ə was by far the most frequent. The vowels formed in a middle position, *a*, ʌ and æ, were also used frequently while the extreme front and back vowels *i* and *u*, were among the least frequently used.
3. Among the consonants labials were most frequent, *b*, and *m* heading the list. Voiced consonants were more numerous than unvoiced consonants formed in the same position; for example, *b* occurred more often than *p*. The frequency of the nasal consonants, *m* and *n*, was less than that of the voiced non-nasal consonants of the same positions, *b* and *d*, but greater than that of the breath consonants, *p* and *t*.
4. Twelve different vowels and four diphthongs occurred a total number of 1578 times as single sounds. Only six different consonants were used singly, in 31 different instances.
5. The deaf children showed a great preference for the use of the consonant in the initial, or releasing, position in the syllable. Twenty different consonants were used a total of 1308 times in this capacity, and only ten in 99 different cases to arrest a vowel.
6. Syllable repetitions, *a-ba, a-ma,* etc., such as occur in the babbling of hearing children, were frequently noted in the vocalizations of the deaf.
7. The frequency of vowels, diphthongs, and consonants used was about the same in the vocalizations of the profoundly deaf and of those having some hearing. There seems to be a tendency, however, for the profoundly deaf children to prefer consonants that are easily produced.
8. Differences in degree of hearing loss did not seem to affect the range of vowels and diphthongs used, but further investigation would be necessary to determine whether the children with more hearing have a greater range of consonants at their command.
9. Degree of hearing did not affect the variety of sound combinations.
10. Individual differences in the kind and amount of vocalizations were not explainable in terms of degree of hearing loss. Other factors such as social maturity, personality, and intelligence were probably important.
11. The children observed during the first months of instruction had not begun to carry over into their spontaneous vocalizations the sounds that they had been taught in school.
12. In the children observed gesture occurred as part of every communication with or without vocalization. Vocalization never occurred alone. In situations of simple inquiry gesture was more frequently used alone than accompanied by vocalization; in situations of desire, wish, or explanation in which there was greater excitement or tension gesture occurred more frequently accompanied by vocalization than alone.

I. S. F.

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[1] The consonants which did not occur in the vocalization of the deaf children were *z*, *ʃ*, *ʒ*, *dʒ*, and *hw*.

The Language of Gesture, by Macdonald Critchley, M.D. 1939. Edward Arnold and Company, London.

To workers with the deaf, a newly published book, *The Language of Gesture,* by Macdonald Critchley, M.D., F.R.C.P., is an invaluable source of information and one no school for the deaf should be without. To us it is marvelous that the author should cover so wide a field in so small a space, just under 125 pages. The book is interestingly and even vividly written throughout, covers practically the whole field and teems with suggestive and attractive ideas for further research.

The author, a London brain and nerve specialist, in contact with an unusual case of deafness, was spurred on to further study of the deaf in general, and this book is the result. So important do we feel this work to be that we have no hesitation in suggesting that it should at once take its place with the leading world textbooks on this subject for the use of students. It skillfully surveys what gesture is and is not, how it affects speech and how it can or cannot take the place of speech. It contrasts gesture with speech from the standpoint of philology and phonetics, and it shows its scope for utility, though we think in these days a further chapter on gesture of war and peace, travel and transport by air, sea and land, by car and cart could be added. Its effects on animal life are left tantalizingly suggestive and ideas in this regard seem poised in mid-air as it were. There are chapters on Secret Societies; Religious; Symbolic; Occupational and Oriental aspects of this thrilling and hitherto far too-little studied subject. One of the book's very greatest values is that it takes one right out into another world that is full of imagination and vision, yet is startlingly real. The universal scope of sign language as a social instrument is well surveyed; the language of the Red Indians is not ignored, nor are the codes in use in Australia among Aborigines or the Caucasian Russians or a newly discovered language of gesture in use in West Africa. Numerous experts such as our own Sir Richard Paget, probably the greatest living authority on this subject, with the late J. Schuyler Long,

Thompson Seaton and others are all consulted and carefully noted.

The past history of gestures and references to types and kinds, shades and grades are all equally carefully, even if swiftly, touched upon, a consummate treatment that should go far toward raising gesture to its rightful place as a study worthy of scientific approach. In this Dr. Critchley does an unprecedented service to the totally deaf, in addition to making a valuable contribution to medical, phonetic and philological literature.

In England the publishers of the book are Edward Arnold and Company, London. The American representatives are Longmans, Green and Company, 114 Fifth Avenue, New York City, from whom copies may be obtained at $1.75 each.

SELWYN OXLEY, M.A.
Hon. Organizing Secretary, Guild of St. John of Beverly
Cheltenham, England

Miscellaneous

I. S. F.

Fiftieth Anniversary Celebration of the Association.—This year marked the Fiftieth Anniversary of the founding of the American Association to Promote the Teaching of Speech to the Deaf, and in celebration of this event the Association combined with its Summer Meeting in Providence, R.I., June 17 to 21, a special program in honor of its founder, Dr. Alexander Graham Bell, and other early leaders in its history.

Among the events in this special program were a Historical Dialogue, presented in costume by the Basement Players of Providence, which gave passages in the words of the original speakers from the early meetings of the Association to indicate the aims of the organization; an address, How Can We Best Fit Ourselves to Teach Speech to the Deaf, in the words of Dr. Caroline A. Yale, presented by her great-niece, Mrs. June Yale Probyn; an address, Helping the Deaf Read the Lips of Their Hearing Contemporaries, in the words of Mabel Hubbard Bell, presented by her granddaughter, Mrs. Barbara Fairchild Muller; an address, The Association and Its Purposes, in the words of Dr. Bell, presented by his grandson, Mr. Melville Bell Grosvenor; greetings from representatives of other organizations and co-operating groups; addresses on the influence of the Association, by Mrs. Anna C. Hurd, charter member, and Dr. Harris Taylor, past president; presentation of a Golden Birthday Fund, Master Gilbert Grosvenor, 2nd, great-grandson of Dr. Bell; acceptance of the Golden Birthday Fund, Mrs. Calvin Coolidge, honorary president; an address, A Plea for Better Results in the Instruction of the Deaf, in the words of Dr. A. L. E. Crouter, presented by his son, Mr. Alan Crouter; an address on Aural Instruction, in the words of J. A. Gillespie, presented by Mr. C. D. O'Connor; and a Message to the Association, by Helen Keller.

The Summer Meeting proper was itself noteworthy for the excellence of the papers delivered, the general addresses,

classroom demonstrations and exhibits. The Meeting was held in Providence on the invitation of the Rhode Island School for the Deaf acting for all of the schools for the deaf in New England as combined hosts. The sessions were well attended by teachers, heads of schools and others interested. An unusual feature of the meeting was a special program for parents of deaf children under direction of Miss Grace D. Hall of the Horace Mann School, Boston. This program consisted of a series of papers, discussions and demonstrations preceding the formal sessions each morning.

Mr. John Yale Crouter, principal of the Rhode Island School, and the members of the school staff were untiring in their efforts to provide for the comfort and entertainment of the visitors. Sightseeing trips in and about the city of Providence, special luncheon meetings, a reception and dance, and a boat ride to Newport were special occasions of congenial entertainment.

At the business meeting, the following members were reelected for the three-year term, 1940-1943: Miss Margaret Bodycomb, Mr. D. T. Cloud, Mr. T. C. Forrester, Miss Jennie M. Henderson, and Dr. Olive A. Whildin.

Nineteenth Triennial Meeting of the N.A.D.—The Nineteenth Triennial Meeting of the National Association of the Deaf was held this year in Los Angeles, Calif., July 21-27, inclusive, an unusually large number of persons attending the daily sessions. Reports indicate at times over 1,500 were present. In addition to the usual reports on the business affairs of the association and a program of entertainment, the meeting was marked by addresses by persons of prominence, including one on The Education of the Deaf by Mr. E. A. Stevenson, principal of the California School, and papers on The Deaf in the Hearing World, by Mrs. Sylvia Balis, The Economic Condition of the Deaf in Canada, by Mr. David Peikoff, The National Fraternal Society of the Deaf, by its grand president, Mr. A. L. Roberts.

In his address as president, Mr. Marcus L. Kenner of New York considered the problem of educational policy in schools for the deaf, W.P.A. discrimination, the proposed

national bureau for the welfare of the deaf in the U. S. Department of Labor, publicity needs, the endowment fund to establish a permanent secretariat for the association, and civil service status of the deaf.

Following the adoption of resolutions, the election of officers resulted in the choice of those named below:

President: Dr. Tom L. Anderson, Iowa.
First vice president: Mrs. May E. Cool, California.
Second vice president: T. Y. Northern, Colorado.
Secretary-treasurer: Byron B. Burnes, Minnesota.
Board members: Marcus L. Kenner, New York; Mrs. Sylvia Balis, California; Dr. Thomas F. Fox, New Jersey.

The 1940 Census and the Deaf.—In another section of this issue of the ANNALS, pages 340-1, appears a brief article by a member of the staff of the U. S. Census Bureau explaining why it was not possible to include the deaf in the current decennial census of the general population.

The problem as it is viewed by educators of the deaf is expressed in the following editorial in the *Maryland Bulletin* January 1940, by Dr. Ignatius Bjorlee, superintendent of the Maryland School.

In the 1940 census taken by the United States Government, there will be no record made as to the number of deaf. This break in precedent is justified by the census director primarily on the grounds that the number of replies in the affirmative are relatively so few that the census takers have in the past become negligent with the result that the question has been ignored and figures as tabulated were inaccurate.

This was the information given at a conference held at the census department office on December 19, when Dr. Hall, Prof. Fusfeld and the writer were given an interview at which Dr. Vergil D. Reed, acting director of the Bureau of Census; Dr. John Collinson, assistant chief statistician, Division of Vital Statistics, Bureau of Census; Mr. Oliver C. Short, director of Census Personnel; Dr. Willis C. Beasley, psychologist, National Institute of Health, and Dr. Richard O. Lang, technical assistant, Division of Population, Bureau of Census, were present.

During the course of the interview it was further learned that certain agencies associated with the hard of hearing and certain manufacturers of hearing aids had used their influence toward having this feature of the census eliminated.

As president of the Convention of American Instructors of the Deaf, we had been in correspondence with the director of the Census on the subject and more than a year ago the bone of contention seemed to be that nomenclature stood in the way of an accurate census taking covering the deaf. To us this would seem to have been the more valid reason and is one in which educators of the deaf must accept responsibility. Such glaring confusion as grandpa, cupping his ear in order to hear more distinctly, being tabulated as deaf, while

the mother of a bonafide deaf child was confused in making reply because the term used was "deaf-mute" and the child having learned to speak could according not be characterized as "mute."

Several years ago definitions tending to clarify this situation by using both the term "deaf" and the term "hard of hearing" was adopted by the Conference of Executives of American Schools for the Deaf and subscribed to by practically all residential schools for the deaf. This definition was so clear and comprehensive to the man on the street that it is unfortunate all groups did not accept this terminology for the want of better definitions. To inject the theory that a person who could speak and read the lips should not be termed "deaf" would appear to be a fallacy. According to all recognized definitions, a person deprived of all usable hearing must be conceded to be deaf, while on the other hand a person who could hear either when spoken to at close range in a loud tone of voice, or with the use of a hearing aid, could most logically be characterized as hard of hearing.

If these definitions had been adopted by the Bureau of Census, it is reasonable to assume that the statistics would have been much more accurate than was formerly the case.

The committee was, however, given the assurance that because a very exhaustive survey had recently been made covering hearing loss among all residents in a number of large cities throughout the United States, it was felt that these figures could be used as an indication of the number of deaf in proportion to the total population. It was further stated that consideration would be given to the advisability of incorporating such figures with the printed findings of the census, thereby enabling those interested in the subject of research, to make a comparative study for the past decade along lines of previous census figures.

There seems to be at the present time a concerted effort on the part of some to make the percentage of hearing loss larger than a practical study would deem justifiable. This, we feel, is a mistake. Why should we endeavor to impress upon an individual the fact that his hearing perception is slightly below normal when he would in all probability have gone through life scarcely conscious of the fact?

The blind are also exempt from the present census and again the reason would seem to be a confusion in the use of terminology. We were told, for instance, that there are more blind people in the United States today receiving government aid than there were blind people tabulated in the 1930 census. And this can probably be explained by another statement to the effect that according to the definition used by the government agencies "a man who can not see without the aid of glasses is characterized as blind." Obviously the term is erroneous. Such person should logically be termed partially sighted.

It is strange how educators can continue to be at a loss to agree on definitions that could be understood by the rank and file. This is particularly true when we realize the incalculable harm which has come to the deaf as a result of the use of such now obsolete terms as "deaf and dumb" and "deaf-mute."

New Applications for Teachers' Certificates.—During the summer months twenty additional applications for Teachers' Certificates under the Conference of Executives of American

Schools for the Deaf were received from the following named persons, bringing the total number of those already filed to 1,099. It is expected these applications will be cleared before the beginning of the new school term. Application forms and information concerning qualifications may be obtained by writing the Secretary of the Executive Committee, Kendall Green, Washington, D.C.

Alice Elizabeth Andrews, Morganton, N.C.
Leon Auerbach, Arizona School
Katherine M. Casey, Georgia School
Corinne Kimberly Drake, Seattle School
Zada Belle Given, Oklahoma School
Jonathan Hall, Gallaudet College
Maude Dixon Kyser, Alabama School
Mary Emily Lintner, Iowa School
William Henry Magearl, Louisiana School
Julia Arnold McDermott, Georgia School
Madge McKinnie, British Columbia School
Irene Grace Middleton, Mackay School
Edythe D. Montgomery, Georgia School
Joyce L. Murphy, Oklahoma School
Ermine Camilla Neal, Indiana School
Roberta Ernestine Neal, Indiana School
Henry James Reidelberger, West Virginia School
Gertrude Mary Walsh, St. Joseph's School, New York
Allie Stovall Woodruff, Georgia School
Herbert Emerson Woodruff, Georgia School.

A Play Enlightening the Public on Deafness.—An unusual offering is in store for followers of the drama this season in a new play with the name "Johnny-Belinda," by Mr. Elmer Harris. The locale of the story is picturesque Prince Edward Island on the Gulf of Newfoundland, and the action is cast among the simple farmer and fisherman folk of that region. The narrative concerns Belinda, the unfortunate deaf daughter of one Black McDonald, a rugged, bellows-lunged tiller of the soil, who, unaware deaf children could be sent to school, had kept her at home until she had reached womanhood. Thus she lived in animal-like isolation, entirely untutored and misunderstood, and possessing no language by

which she could communicate with others. Out of this background the action moves toward tragedy when she acts in defense of her child, Johnny-Belinda.

Although Belinda is regarded by all in the community as the "dummy," unfit to be entrusted with the care of her own child—on the assumption of mental disability, the play demonstrates it is only the lack of education that has brought her woes upon her. Under the patient teaching of a young doctor starting practice among these people, she soon gives evidence of an eager intelligence awaiting release. Having previously been connected with a school for the deaf in Montreal, where he came to know something of methods of instruction, young Dr. Davidson makes use of the sign language, the manual alphabet, writing, lip-reading, and even speech to enable her to gain status as a social being, the final triumph being reached when she utters over her baby the single word "*John-ny*!"

The play, in three acts, had its premiere in Atlantic City, New Jersey, August 19, in the Garden Pier Theater, before an appreciative and responsive audience. The intense interest in the novelty of having the central figure in a play carry the action practically entirely in the conventional sign language of the deaf was more than evident. Mr. Horace McNally as Dr. Davidson, Miss Helen Craig as Belinda and Mr. Louis Hector as her "fither," after only four months of preparation for their parts, gave a masterly display in the use of signs and manual spelling. The credit for this success they readily acknowledge as due to the coaching they received from Mrs. Florence Lewis May, a graduate of Gallaudet College and now of the staff of the Hispanic Society of America in New York.

Educators of the deaf will see in this play an effective aid in their efforts to acquaint the public in general with the meaning of their work. To the achievement of that purpose, Mr. Harris, playwright, has with "Johnny-Belinda" contributed handsomely.

Outline of the Work of Residential Schools for the Deaf.—Bulletin 1939, No. 9, of the U. S. Office of Education, entitled, "Residential Schools for Handicapped Children" is a valu-

able collection of information, compiled by Dr. Elise H. Martens, senior specialist in the education of exceptional children for the U. S. Office of Education, on the work of residential schools for the blind, the deaf, the socially maladjusted and the mentally deficient.

Chapter IV describes the work of Residential Schools for the Deaf, and like the other chapters incorporates a series of photographs that reveal the highlights of their activities. In this chapter are made clear the distinction between the deaf and the hard of hearing, the points which schools for the deaf and for the blind have in common, the general outline of the course of study in the average school for the deaf, the special work in speech and lip-reading, in auricular training and rhythm, extracurricular activities, vocational training and social adjustment, as well as more recent tendencies in the nursery school program and curriculum units of activity.

The booklet contains 103 pages and may be obtained from the U. S. Government Printing Office, Washington, D.C., for fifteen cents.

Hallea H. Stout.—In an address before the Conference of Executives of American Schools for the Deaf, October 24, 1939, on The Deaf Woman and Books, printed in the ANNALS for March, 1940, pp. 158-163, Mrs. Florence L. May, inadvertently made an error in referring to Marfa Smith as a deaf poet of Arkansas, "who writes under the name of Hallea Stout."

Marfa Smith and Hallea Stout are two very real, but entirely different persons. Mrs. May's reference was intended to be to Hallea H. Stout, who in her own right is a poet of distinction and who does not go by any other name.

With Mrs. May, the ANNALS deeply regrets the error and trusts the many admirers of the work of Mrs. Stout will accept this explanation as partial amends for the injustice done.

Resignation of Miss Gay.—Miss Dora I. Gay, director of the Sarah Fuller Home for Little Deaf Children, Roxbury,

Massachusetts, since 1927, resigned in June. It was she who established the present method of teaching young deaf children in the early preschool years in their own homes so that the parents may also receive instruction.

Miss Lillian E. Russell, a teacher on the school staff, succeeds Miss Gay.

Deafness as an Asset.—Occasionally we learn of prominent personages who are the victims of deafness. We note now from a character study by John Hersey in *Life,* July 15, 1940, that Joseph Clark Grew, United States Ambassador to Japan, has one physical difficulty, deafness in the left ear, a handicap acquired as the result of scarlet fever in early childhood. The difficulty, it seems, long made him despair, but, the article adds, "he has since learned the sweeter uses of his adversity." In it he has found compensations, particularly in the duties that are in the line of his official position. Thus, quoting from the story in *Life.*

> It gives him the cocked, alert expression of a well-trained setter. He has never worn hearing appliances, for he well knows the advantages of not being able to hear ill-considered statements—or better yet, pretending not to. Angry words, if they must be repeated to a deaf person, sound preposterously funny. He is conscious, too, of the humor of affliction. When he was the U. S. representative at the Lausanne Conference on Near Eastern Affairs, 1922-23, Grew used to retire into corners with the Turkish Foreign Minister, Ismet Pasha, who was also deaf, and the pair would exchange confidential views in very loud French.

A State Directory of Facilities for the Deaf and Hard of Hearing.—An exceptional service has been performed by the New York Temporary State Commission to Study Facilities for Hard-of-Hearing and Deaf Children and Adults, with the preparation and publication of a Directory of Facilities for the Hard of Hearing and the Deaf in the State of New York.

The compilation is the outcome of a finding by the Commission that there is in general inadequate knowledge on the part of the public concerning existing facilities for deaf and hard-of-hearing persons. The directory makes a broad sweep of all the known services interested in, or available

to, persons acoustically handicapped in the state. In addition to listing the organizations it gives also a brief description of the special activities in each case and names of leading officials. A résumé of the state laws affecting the deaf and hard of hearing prefaces the main body of information.

The agencies listed include organizations of the deaf and the hard of hearing and those of teachers of the deaf and hard of hearing; public school facilities for the deaf and for the hard of hearing; residential schools for the deaf and for the deaf-blind; private schools; state department services, in the state departments of education and labor, respectively; medical services, particularly ear, nose and throat clinics; teacher education opportunities; services of a religious nature; location of auxiliary equipment for the hard of hearing in public telephone stations and in theaters; publications of interest to the deaf and the hard of hearing; workshops; home for aged and infirm deaf-mutes; and a brief glossary of terms.

If it were possible for all other states in the nation to compile a similar survey listing of facilities in behalf of the deaf, there would be available a welcome body of information that otherwise remains scattered and most difficult to obtain.

A New School in India.—Word has come that a new school for the deaf has been opened in South India, at Kunnamkulam, Cochin State. Eleven pupils have already been admitted, all of whom are very poor and hence are given free tuition besides free board and lodging. The founder and manager of the school is Mr. K. T. Matthew, B.A., B.L.

Proceedings of the Berkeley Convention.—Members of the Convention of American Instructors of the Deaf may expect soon to receive their copies of the Proceedings of the Meeting held at Berkeley, California, in the summer of 1939. The work of editing and preparing the material for publication has been done under direction of Dr. Ignatius Bjorlee, past president of the association, and the volume has reached the final stages of printing.

Assistant Editor of the Annals.—The Executive Committee of the Conference of Executives of American Schools for the Deaf, under whose direction the ANNALS is conducted, decided at its meeting in Washington, D.C., in October 1939, to help lighten the work of the editorial office by choosing an assistant to the editor. The choice was Dr. Powrie V. Doctor, professor of English and history at Gallaudet College.

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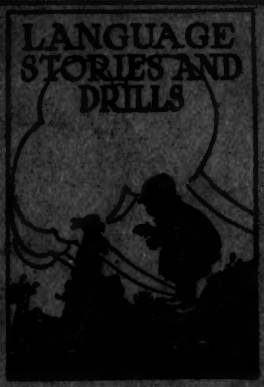

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